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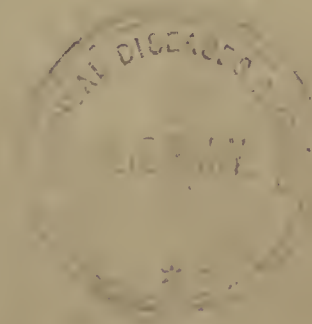
MEDICAL AND SANITARY REPORTS

OF THE

NORTHERN AND ~~SOUTHERN~~ PROVINCES

FOR THE

YEAR ENDED 31ST DECEMBER, 1914.



NIGERIA.
NORTHERN PROVINCES.

ANNUAL
MEDICAL AND SANITARY REPORT

FOR THE
YEAR ENDED 31ST DECEMBER, 1914.



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FOR THE
YEAR ENDED 31ST DECEMBER, 1914.

I.—ADMINISTRATIVE.

STAFF.

The principal changes were as follows :—

Promotions.—Dr. E. A. Chartres was promoted Senior Medical Officer (Grade I.) on 1st January, 1914, on transfer from the Gambia. Dr. C. F. Watson and Dr. W. H. A. Gordon-Hall were promoted Senior Medical Officers (Grade II.) on January 1st, 1914. Dr. H. P. Lobb was promoted Senior Medical Officer (Grade III.) on 1st January, 1914.

Transfers.—Dr. W. I. Taylor to Southern Provinces, Nigeria, on promotion to Senior Medical Officer (Grade II.), 1st January, 1914. Dr. E. C. Adams to Gold Coast, on promotion to Senior Medical Officer (Grade III.), 3rd December, 1914. Dr. A. C. Parsons to Gold Coast on promotion to Sanitary Officer, 27th May, 1914. Dr. J. M. Dalziel to Southern Provinces, Nigeria, on promotion to Sanitary Officer, 29th March, 1914. Dr. W. J. D. Inness to Southern Provinces, Nigeria, on promotion to Sanitary Officer, 1st August, 1914. Dr. G. Rollason was transferred from Sierra Leone on 22nd March, 1914. Dr. W. C. Bower, Medical Officer, was transferred from Sierra Leone, 28th November, 1914. Dr. N. A. D. Sharp, Medical Officer, was transferred from Gold Coast on 9th September, 1914.

Deaths.—Dr. T. P. Fraser, Medical Officer, was killed in action at Mora, Cameroons, on 27th August, 1914.

Appointments as Medical Officers.—Dr. J. T. Watt on 18th August, 1914. Dr. J. C. Watt on 18th August (simultaneously seconded for service with the Admiralty).

Invalidings.—Dr. M. F. Ellis, and Dr. J. R. P. Allin.

Secondings.—The following Officers were seconded for duty in connection with the Yellow Fever (West Africa) Commission during 1914, and were restored to ordinary duty on the dates shown :—

Dr. J. M. Dalziel, 29th March, 1914.

Dr. W. B. Johnson, 27th April, 1914.

Dr. J. E. L. Johnston was employed at the Medical Research Institute, Yaba, Lagos, until 30th November, 1914, when he was restored to ordinary duty.

Resumption of Duty.—Dr. C. T. Costello, who was placed on temporary pension during 1913, resumed duty on 4th March, 1914.

Prisoners of War.—Dr. W. A. Trumper and Dr. J. Lindsay were captured by the German Forces on the Cameroon frontier in August, and are still detained as prisoners of war.

A List of Officers of the Medical Department, Northern Provinces, who served with the Cameroon Expeditionary Forces is appended.

ROLL OF OFFICERS, NORTHERN PROVINCES, SERVING WITH THE CAMEROON EXPEDITIONARY FORCES DURING THE YEAR 1914.

Department.		Rank and Name.		Remarks.
Medical	...	S.M.O.	Watson, C. E. S.	...
	...	M.O.	Willan, R.	...
	...		Trumper, W. A.	Prisoner of war.
	...		Lindsay, J.	Prisoner of war.
	...		Moiser, B.	...
	...		Fraser, T. P.	Killed in action 27.8.14.
	...		Digby, W. E. S.	...
	...		Jeffreys, H. C.	...
	...		Capt. F. E. Bissell	...
	...		Porteous, E. J.	...
	...		Doudney, L.	...
	...		Thomson, J. W.	...
	...		Watt, J. T.	...
	...		Crichton, A. J. M.	...
	...		Davies, L. W.	...
	...		Rollason, G.	...
	...		Johnston, J. E. L.	...
	...		Black, P. W.	...
	...		Wood, B. W. F.	...
	...		Sharp, N. A. D.	...
	...		Pollard, J. M. W.	...
	...		Pearson, C. J. H.	...
	...		Nolan, R. H.	...
	...		Beattie, J. A.	...
	...		Johnson, W. B....	...
	...		Courtney, B. J....	...
	...	S. Sergt.	Cameron, J. D....	...
	...	Sergt.	Ross, W. J.	...
	...		Stroud, M.	...
	...		Harvey, R. E.	...
	...		Milne, A. J.	...
	...		Meason, J.	...
	...		Read, F. L.	...
	...		Godfrey, A. H....	...
	...	Male Nurse	Vincent, J. W.	...

FINANCIAL.

The expenditure of the Department shows a steady increase, due to an increasing non-native population and also a growing demand for European medical treatment by the indigent population.

The following is a comparative table for the past seven years :—

EXPENDITURE.

1908	...	...	...	...	...	£29,780
1909	...	...	...	...	...	30,080
1910	...	...	...	...	...	34,942
1911	...	...	...	...	...	34,577
1912	...	...	...	...	...	37,128
1913	...	...	...	...	...	40,702
1914	...	...	...	...	...	45,096

The Revenue derived for the year 1914 was as follows :—

By Hospital fees	...	...	...	£591	0	6
„ Sale of medical comforts			...	56	16	10

Detailed expenditure for the year is given in Table II.

II.—PUBLIC HEALTH.

The health of Europeans generally, in comparison with former years, may be regarded as satisfactory.

I append the usual tables of analysis.

EUROPEANS.

	1911.	1912.	1913.	1914.
Average population	641	703	804	969
Number of deaths	13	22	13	27
Death rate per 1,000	20·28	31·29	16·04	27·86
Number invalided	40	50	70	82
Invaliding rate per 1,000	62·40	71·12	87·06	84·62

Six of the above deaths were due to blackwater fever, and nine were killed in action on the Cameroon frontier.

BLACKWATER FEVER.

	1911.	1912.	1913.	1914.	Average.
Number of cases	12	14	17	22	16
Number of deaths	6	4	6	6	5·5
Rate per 1,000 of average European population	18·72	19·90	21·14	22·70	20·61
Case mortality per cent.	50·00	28·57	35·29	27·27	35·28

A full report on the cases of blackwater fever has already been submitted, in which it was stated that the total number of cases was 22, whereas the Nosological Tables show 26 admissions. This is accounted for by several patients having been transferred from outstations to hospitals during their illness.

The Nosological Tables show only five deaths from blackwater fever, but the sixth case was attended by a private practitioner, and was therefore not included in any return of sick.

EUROPEAN OFFICIALS.

The diseases for which European officials mainly were treated were malaria, dysentery, blackwater fever and diseases of the digestive system.

Generally speaking, the health has been fair.

Two cases of sleeping sickness were treated during the year and invalided to England, and an investigation into the prevalence of this disease on the Benue river, where both patients were infected, is now being carried out by the Sanitary Officer.

One fatal case of yellow fever occurred during the year in a European railway official.

This is the first, and, so far, the only case reported from the Northern Provinces, and every precaution was taken to prevent its spread.

There were 66 Europeans treated for dysentery during the year, which is an increase of 27 over the number treated in 1913.

Four European officials were treated for diphtheria in the month of January. They were all serving in the same station, and the first case, who had only just arrived in the country, had probably carried the infection. One case ended fatally, the remaining three being invalided.

The usual statistical tables are subjoined.

Table showing the sick, invaliding and death rates of—

EUROPEAN OFFICIALS.

	1911.	1912.	1913.	1914.
Total number of officials resident... ..	510	487	488	769
Average number resident... ..	360	325	326	543
Total number on sick list	861	819	532	1,031
Total number of days on sick list	7,108	6,049	4,487	4,811
Percentage of sick to average number present ...	233·3	252	163·22	188·03
Average number of days on sick list to each patient	8·23	7·39	8·43	4·66
Average sick time to each resident	19·2	18·6	13·73	8·86
Total number invalided	40	25	50	61
Percentage of invalidings to total residents ...	7·84	5·13	10·24	7·93
Total deaths	7	6	4	20
Percentage of deaths to total residents	1·19	1·23	·82	2·60
Percentage of deaths to average residents	1·89	1·84	1·22	3·68
Number of cases of sickness contracted away from residence	—	—	—	4

In addition to the above, one invalided official died in England.

Of the 20 who died in 1914, 9 were killed in action on the Cameroon frontier.

NATIVE OFFICIALS.

	1912.	1913.	1914.
Total number of officials resident	740	760	943
Average number resident	621	634	786
Total number on sick list	574	273	335
Total number of days on sick list	3,265	2,054	2,749
Percentage of sick to average number present ...	92·43	43·06	42·62
Average number of days on sick list to each patient...	5·68	7·52	8·20
Average sick time to each resident	5·25	3·24	3·49
Total number invalided... ..	4	3	1
Percentage of invalidings to total residents	·54	·39	·10
Total deaths	2	3	4
Percentage of deaths to total residents	·27	·39	·42
Percentage of deaths to average residents	·32	·47	·51
Number of cases of sickness contracted away from residence	—	—	—

GENERAL EUROPEAN POPULATION.

The average number of Europeans resident in the Northern Provinces during 1914 was 969, of whom 56 were women.

Details of these figures are as follows:—

	1913.	1914.
Government Officials	326	543
Trading Firms	156	165
Mining Companies	286	223
Missions	36	38
Total	804	969

INVALIDING OF EUROPEANS, 1914.

Cause.					Officials.	Non-officials.	
Dysentery	...	...	...	...	8	...	—
Diphtheria	...	...	...	...	3	...	—
Malaria	...	...	...	...	5	...	—
Blackwater fever	...	...	...	...	6	...	5
Rheumatic fever	...	...	...	...	1	...	1
Sleeping sickness	...	...	...	...	2	...	—
Anæmia	...	...	...	...	4	...	2
Debility	...	...	...	...	3	...	1
Morphinism	...	...	...	...	1	...	—
Neuritis	...	...	...	...	2	...	2
Epilepsy	...	...	...	...	1	...	—
Neuralgia	...	...	...	...	—	...	1
Neurasthenia	...	...	...	...	7	...	—
Headache	...	...	...	...	—	...	1
Mental stupor	...	...	...	...	1	...	—
Insomnia	...	...	...	...	1	...	1
Polyneuritis	...	...	...	...	1	...	—
Valvular disease of heart	...	...	...	...	1	...	—
Hæmoptysis	...	...	...	...	—	...	1
Enteritis	...	...	...	...	—	...	1
Appendicitis	...	...	...	...	3	...	1
Colitis	...	...	...	...	3	...	—
Gastritis	...	...	...	...	—	...	2
Congestion of liver	...	...	...	...	1	...	—
Stricture of urethra	...	...	...	...	1	...	—
Arthritis	...	...	...	...	1	...	—
Orchitis	...	...	...	...	1	...	—
Synovitis	...	...	...	...	1	...	—
Boils	...	...	...	...	1	...	—
Ulcers	...	...	...	...	1	...	—
Gunshot wound	...	...	...	...	1	...	—
Fracture	...	...	...	...	—	...	1
Other causes	...	...	...	...	—	...	1
Total					61	...	21

GENERAL NATIVE POPULATION.

The Native population is estimated at 9½ millions, which is the same figure as last year.

Reliable statistics of births and deaths are not yet obtainable.

TABLES OF CASES OF MALARIA FEVER.

EUROPEANS.

CASES.				DEATHS.			
1911.	1912.	1913.	1914.	1911.	1912.	1913.	1914.
207	309	370	400	—	1	1	1

NATIVES.

CASES.				DEATHS.			
1911.	1912.	1913.	1914.	1911.	1912.	1913.	1914.
1,429	1,705	1,568	1,757	11	6	5	24

TOTAL CASES OF MALARIA TREATED.

(EUROPEAN AND NATIVE.)

CASES.				DEATHS.			
1911.	1912.	1913.	1914.	1911.	1912.	1913.	1914.
1,636	2,014	1,938	2,157	11	7	6	25

The routine of sanitary activity was, like all other matters, considerably upset by the outbreak of war, as many medical stations had to be closed, as a number of Medical Officers were required for military service.

There was, however, a good deal of useful work done during the first half of the year.

The lay-out of areas surrounding every actual or proposed railway station throughout the entire railway system, within the Northern Provinces, was arranged; and such old-established stations as Kano, Zaria, Minna, Baro, Lokoja, Ibi, Ilorin and Jebba received every attention.

The pipe-borne water supply at Lokoja amply justified its installation; and it was extended with good results.

The site of the new capital at Kaduna received frequent attention; and both the Senior Sanitary Officer and his Junior resided on the site several times. This was necessary, to avoid the surface pollution of the site itself by the numerous natives temporarily in occupation there.

The Kano water-supply, which had caused anxiety for some time, was investigated by the Sanitary Officer, who succeeded in isolating a hitherto unknown bacillus closely allied to the typhoid group.

Immediate steps were taken to reform the water supply by closing many wells and sterilising the remainder, and by the end of the year it was much improved. The installation of the proposed new supply from the Shalawa river will be a very welcome reform.

The question of noxious trades—especially in connection with fellmongers at Kano and Zaria—became of some importance during the year.

Some steps were taken to deal with it; but it will not be satisfactorily settled until the railway authorities are able to meet the requirements of the fellmongers and others concerned.

The Sanitary Officer was sent up the River Benue in November to investigate the extent of trypanosomiasis in that district and to devise preventive measures. He was still engaged in this work at the end of this year.

All the sanitary activities described in former reports were maintained, and even extended, so far as the times would permit.

III.—SANITATION.

(A)—GENERAL REVIEW OF WORK DONE, LAWS PASSED AND PROGRESS MADE.

(I.)—ADMINISTRATIVE.

The year opened with an ambitious programme, so far as the amount of work in contemplation was concerned, and, for seven months, the work was conducted with the requisite swing; but, thereafter, the war having broken out, sanitary activity, beyond the usual maintenance of established routine, had necessarily to give place to affairs of more pressing importance.

Many medical stations had to be closed down, to release the Medical Officers, normally posted thereto, for military service; while many Political Officers, accustomed to the helping on of sanitary activity, had their attention monopolised otherwise. Likewise, various persons, whose collaboration was necessary for the adequate carrying out of specific pieces of sanitary work, ceased to be able to co-operate with the Sanitary Officers.

The consequence of this was that, during the last five months of the year, the activities of the Sanitary Officers were directed, to a considerable extent, either to work of secondary importance from their point of view, or to strictly Medical duties.

Nevertheless, much work of an enduring nature was effected during the year.

The final lay-out of the areas surrounding every actual or proposed railway station throughout the entire railway system, within the Northern Provinces, was arranged; this was done in a thoroughly systematic manner; the Chief Surveyor, the accredited representative of the General Manager of the Nigerian Railways, a Political Officer of each Province concerned and the Senior Sanitary Officer working in collaboration in every case. In each case, the unanimous finding of the officers mentioned above was, by the Chief Surveyor, embodied in a plan which was subsequently submitted to His Excellency.

Such old-established stations as Kano, Zaria, Minna, Baro, Lokoja, Ibi, Ilorin and Jebba received an adequate amount of attention; while Yola, the most remote of the stations on the river Benue, having become an important military base, received more consideration than it had ever enjoyed before.

The site of the new Capital at Kaduna naturally demanded and received frequent attention, and both Sanitary Officers actually resided thereon several times. This was necessary, particularly, to safeguard the public health of the people employed, and, above all, to avoid the surface pollution of the site itself by the numerous natives in temporary occupation thereof.

The important division of Kwongoma was traversed, in association with the Political Officer in charge thereof, and the foundation of much useful sanitary work was laid therein; various Sarakuna, or native rulers, together with their henchmen, were interviewed—most of them not for the first time—and the causes and prevention of the gravest dangers to the public health, in the various regions concerned, were carefully gone into.

The water supply of Kano, which had been a source of anxiety for some time, was thoroughly investigated by the Sanitary Officer, on two separate

occasions. *Inter alia*, he succeeded in isolating a hitherto unknown bacillus closely allied to the typhoid group. Drastic steps were taken to reform the water-supply, and the end of the year found it as far improved as it is ever likely to be, before the installation of the proposed new supply from the river Shalawa shall have been effected.

The question of noxious trades—especially in connection with the activities of fellmongers at Kano and Zaria—became one of public importance during the year. It cropped up as a surprise; for offensive trades, so well known to the legislator and to the public health practitioner at home, had not been contemplated by the Sanitary Officers as a problem likely to arise soon in this non-manufacturing country. Some steps were taken to deal with it; but it will not be satisfactorily settled until more settled conditions shall have enabled the railway authorities to meet the requirements of the fellmongers and others concerned.

One case of yellow fever—a fatal one—in a European official was reported from Jebba in July. It was, and happily remains, the only case of this fever ever known to have occurred within the Northern Provinces. Every possible step was taken to prevent its recurrence. Further reference will be made to this case later.

Trypanosomiasis showed its presence obtrusively on the river Benue in the autumn, and two European officers, who had contracted the disease while serving on the river, were invalided home. The Sanitary Officer was sent up the Benue, at the end of the year, to investigate the extent of the disease there and to devise preventive measures.

'The progress in leper segregation was greatly curtailed by the outbreak of war; in more than one region there was actual retrogression.'

Early in the year a Committee had been convened at Lagos by His Excellency the Governor-General, to consider types of housing for the permanent accommodation of Europeans and non-Europeans in the service of the Government, with special reference to the new Capital. Before returning north, the Chairman submitted the recommendations of the Committee, together with plans illustrating them, to His Excellency.

Until the harvest had been gathered in there was great scarcity in different parts of the Northern Provinces, particularly in the northern emirates thereof—the result of the scanty rainfall of the preceding year. Many deaths—not shown statistically, as they did not come under official notice—occurred from disorders directly or indirectly traceable to famine; but they were small in number compared with those which occurred from the same causes in the adjoining regions under French and German administration respectively. The deaths here referred to would have been greatly more numerous in the Northern Provinces had the Government not effected the prompt and energetic relief measures which it did.

KADUNA.

During the year the site of the new Capital, now officially designated Kaduna—the site of the railway headquarters at the bridge is now officially designated Kaduna Junction—was considerably opened up by the laying out of main roads. As the opening up process proceeded, the site kept steadily rising in the esteem of those residing thereon and of frequent visitors, and it became evident that Kaduna was destined to be an invitingly attractive—and, for this part of Africa, a healthy—station.

Temporary quarters for clerks and artisans and camps for labourers were constructed away from the permanent part of the site itself: a necessary

precaution, in view of the difficulty of imposing sanitary discipline upon those people, in the absence of established station regulations.

Many of the raw labourers employed arrived at the site evidently suffering from the effects of famine, and employment thereon constituted a genuine relief work for them—a relief work differing from many such works, inasmuch as it was a productive one.

Drainage is easy, for the natural contours lend themselves to this. The level of surface water is at such a depth as to remove all danger of the ground becoming water-logged, and the free percolation greatly minimises the danger arising from the formation of pools and puddles.

A temporary piped water supply had been laid on by the end of the year: a boon at once sanitary and economic. Of course, this adumbrated a permanent piped supply laid on by gravitation, which, by removing all excuse for the presence of roof-gutters, tanks and kindred appliances, would make the elimination of the domestic mosquito merely a matter of reasonable care.

After the harvest had been gathered in and the exceptional scarcity had thus been made good, supplies became plentiful—meat had always been plentiful—and it was seen that, in normal years anyhow, lack of supplies was not likely to constitute a drawback in the future.

Anything like indiscriminate cutting down of trees was prohibited; only such clearing as was absolutely necessary was permitted; and it was laid down that no clearing of a permanent nature should be effected, unless when done under the immediate supervision of a forestry expert. There is no part of the world where the formation of laterite takes place more rapidly than it does in this part of Africa; this natural process takes place with infinitely greater rapidity when vegetation no longer protects the surface from the forces of denudation; it is a pity that geologists seem to have directed so little of their attention to the phenomenon, and there is probably no other instance in Nature in which geological and historical time so nearly synchronise.

KANO.

The expansion of Kano, adumbrated in the report for the previous year, did not take place, for obvious reasons. The demand for one of its leading products became greatly curtailed, just when the season in which it could be handled to the best advantage was approaching, and the commercial community could hardly be expected to expand their operations in the presence of a contracting market.

During the year, as stated above, the quality of the water supply excited well-founded alarm. Following two years of scanty rainfall in succession, many of the wells dried up, all became exceptionally low, and intestinal disorders became alarmingly prevalent.

The Sanitary Officer was despatched on two occasions on a mission of investigation. *Inter alia*, he made cultures from the various wells, and also from the dejecta of typical sufferers from intestinal ailments, in addition to which he wisely invoked the assistance of the Director of the Research Laboratory at Yaba.

He found that most of the wells were gravely contaminated. Of course there is little doubt that practically all the wells in the Northern Provinces are more or less contaminated; it could hardly be otherwise under existing conditions. But in a gravely large proportion of the wells now in question the contamination was of faecal origin, while bacilli akin to the typhoid group were observed in cultures made from the dejecta of patients.

Many wells were closed finally, others were sterilised, and, above all, numerous new wells were dug remote from the old and well removed from sources of contamination. A most rigorous system of inspection and supervision of wells was instituted by the Senior Medical Officer, acting in concert with the Station Magistrate, and the reforms thus effected resulted in the improvement which has been mentioned above.

It was at Kano that the problem of offensive trades, already referred to, first cropped up. At Kano there is a very large trade in hides, and the fellmongers conduct their curing operations on their residential trading sites. Arsenical preparations, which are highly poisonous, are used for curing purposes, and, in addition to this danger, nuisance sometimes results from the offensive effluvia given off.

The European fellmongers, at all events the leading ones, are quite prepared to take up new sites on which to conduct their operations remote from inhabited centres. But before they can act in this manner they require certain indispensable conditions to be guaranteed. These are:—Such sites must have free access to water, they must be comparatively large in area, and they must be on railway sidings. It will be seen from this that the railway authorities on the one hand and the fellmongers on the other must arrive at a mutually convenient arrangement before the matter can be satisfactorily settled, and in this connection, it must not be forgotten that the railway line is single, and that traffic thereon is conducted on the “staff system.”

The Lieutenant-Governor, about the middle of the year, having taken up the matter actively, directed the Resident of the Province, the Chief Surveyor, and the Senior Sanitary Officer to go into his requirements with the leading fellmonger, and, thereafter, to seek a suitable site further from Kano, on which the fellmongers could conduct their operations without causing nuisance to other people. The officers named were further directed to secure the co-operation of an accredited representative of the railway. This was done, in due course, and a suitable site was found on the right bank of the river Shalawa, below the intake of the proposed new waterworks. A correct plan of the place was prepared, and in due course submitted, by the Chief Surveyor.

The scheme will no doubt be effected, what time the advent of normal conditions shall have justified the railway authorities in undertaking further construction.

As immediate change was impossible, and as the trade was much too valuable to suspend without paramount necessity, it was arranged that the operations should be permitted to go on, subject to the requirements of the local Health Officer being met.

During the year the war, together with the decreased trading activities resulting therefrom, caused a temporary decrease in the population of the political station. Having regard to the state of affairs mentioned above, this was not an unmixed evil from the sanitary point of view.

The transfer of the population of the native hospital and of the prison to new buildings correctly situated was a welcome move forward in the direction of sanitary progress.

The Native City of Kano continues to deserve the favourable observations made about it in the past.

ZARIA.

Expansion at Zaria, never expected to assume the dimensions looked for at Kano, had a set-back for the same reason.

During the year the sanitation of the station was well maintained. The question of offensive trades cropped up, but never to the same extent as at Kano, and it was dealt with in the same tentative way.

Arrangements were made to improve very effectively the sanitation of some of the European traders' residential plots by giving them extensions of area behind, at nominal rents; a new market for food stuffs, for the convenience of the European community was established—no natives allowed to reside beside it; and a very real sanitary reform was effected by evicting all natives, under the Native Administration, from the non-European alien quarter of the station. The natives thus evicted were accommodated in a new extra-mural suburb of the native city. The suburb in question was laid out on the most approved and simple lines, while its caravansary was marked out beyond the suburban boundary. If a market spring up there, as is almost inevitable, it will be situated beside the caravansary.

It had been intended to effect a somewhat ambitious, but highly desirable, hospital scheme inside of the native city; but this, like sundry other desirable plans, had to be abandoned for the time on account of existing circumstances.

MINNA.

The sanitary conditions were well maintained, and considerable improvements were effected for the convenience of the travelling community daily frequenting the railway station, which is one of the busiest junctions in the country.

During the year the final lay-out of the residential trading quarter of the European traders was arranged; so also was that of the non-European alien quarter, which is chiefly inhabited by employees of the railway; and it was wisely decided that all indigenous natives, not in regular European employment, should find their accommodation in the native town. Here it may be wise to define, once for all, what is meant, for the purposes of this Report, by the terms "Native Town" and "non-European Alien Quarter" respectively.

"Native Town" means a place inhabited exclusively by indigenous natives, who are under the jurisdiction of the Native Administration, as distinguished from that of the Station Magistrate, or other officer, who rules directly as the representative of Government.

"Non-European Alien Quarter" means a place inhabited by non-Europeans, who are not indigenous natives of the Northern Provinces and who do not come under the jurisdiction of the Native Administration.

This is a vital distinction from the political point of view, and it is an equally vital and most practical one from the sanitary standpoint. This matter, although so important, need not be laboured here, for it has been dealt with in former reports.

BARO.

There is practically nothing to report about Baro which might be accounted new. During the year its sanitary condition was creditably maintained, considering its present limitations.

The end of the year found it likely to be deprived of the services of a resident Medical Officer for a considerable period at any time.

ZUNGERU.

The feature of the year at Zungeru was the final departure of the military population. A small number—never more than one company—of soldiers had

been left there when the headquarters of the Northern Nigeria Regiment moved north; but even that small number was withdrawn in the course of the year, and Zungeru became an exclusively civil station. Even then all the European quarters were occupied.

The general sanitary condition was satisfactory, which might be expected in a comparatively old-established place, whose population had been materially reduced while its developed machinery remained in working order.

After having been occupied for twelve years, Zungeru has become a comparatively healthy place for this part of Africa, showing thus what can be done by regular attention to a given locality. But it will never be a comfortable place for the European; too far inland to enjoy the breezes of the Coast, its climate is a hot continental one; while its situation on a rolling slab of laterite at a low elevation renders work a toil for the average man during well nigh half the year.

JEBBA, ILORIN AND OFFA.

These places are much as formerly described. During the year the chain formed by them became prominent on account of a case of yellow fever having been reported from Jebba. As formerly reported, they had been carefully watched, because they lay along one of the most likely routes for the passage of yellow fever into the Northern Provinces.

There seems to have been no doubt about the correctness of the diagnosis, although, as shall be mentioned later, the case constituted a very difficult problem.

From the last yellow fever scare until the occurrence of the case in question, sanitary vigilance had never been relaxed, and thereafter it was, if possible, increased. The case was, and remains, an isolated one. Immediately after it had been diagnosed a careful examination of the whole population was undertaken, to find if, by chance, any other case had been overlooked; but no other case—not even a suspected one—was found.

In light of this experience, it seems only fair to claim that the precautions which have been, and are being, taken against invasion by yellow fever have been, and are, effective.

So far, Jebba has lent itself particularly well to the winnowing out of possible cases at the southern bank of the Niger; for, normally, trains from the south stable up there for the night, and the passengers do not cross the river until the following morning. But when the bridge shall have been completed, effective inspection will have by some means to be carried out more rapidly than is necessary at present.

LOKOJA.

Lokoja, like most other busy places, became much less populous and busy during the latter part of the year. Most of the military and a considerable proportion of the civil population left for the time being; trade became much slacker, and the nomadic population did not frequent the place so often.

During the year the water catchment on the face of Patti Lokoja was extended and the piped water supply from that source was increased. The additional water thus laid on retained the high level of quality which had been previously reported. Pure water was supplied to all the European and a large proportion of the native population, and all the passenger steamers plying on the river were likewise supplied. All visitors to Lokoja remark the high quality of the aerated waters obtainable there, entirely due to the new water supply.

The usual difficulty was experienced in keeping the station clear during the rains, but, on the whole, the sanitary condition of the political area was maintained at a comparatively high level; and, with all its deficiencies, the truth remained that it might truly be called a health resort, in comparison with what its condition had been not many years before.

The quarters of the Europeans and non-Europeans in the employment of the Government were kept in a good state of repair, and that portion of the population was one of the most comfortably and healthily housed communities in the Northern Provinces.

The native town continued to stimulate the sanitary initiative of the authorities, and demanded all the unremitting attention called for by the place, whose sanitary system could never be converted into an automatically going concern.

The scheme of transferring the bulk of the native town to a new site south of the river Mimi was kept in view; the site was surveyed, and everything was put in train for effecting the move so soon as the advent of more settled times might render the circumstances suitable therefor.

The places mentioned above are typical of the Government stations throughout the Northern Provinces.

All stations have had their sanitary condition as well looked after as the suddenly sustained limitations due to the war have permitted.

In addition to some stations having been deprived of their Medical Officers, by the end of the year, wherever two Medical Officers had been employed normally, only one was available for the entire duty, and the services of that admirably useful type, the British Non-Commissioned Officer seconded from the R. A. M. C., were to a large extent lost. Their services were always held in high esteem here, and they are, if possible, all the more highly esteemed now that they are hardly available at all. It is only fair to take the opportunity here of recording the fact that it is no exaggeration to say that one of those men is worth half-a-dozen non-Europeans: he belongs to a type which runs straight, can be put on honour, is competent, knows the work and does it, and can always be depended on.

In various regions from which Medical Officers have been recalled, Political Officers—themselves working short-handed—have done yeoman service in sanitary work, and, not contented with this, they have used the drugs and appliances left behind by Medical Officers to render such medical aid to the natives as educated European laymen may.

LEGISLATION.

No Sanitary Legislation was effected during the year, but the simplifying, reforming and codifying of the Sanitary Laws and Regulations of Nigeria were under consideration.

PROGRESS MADE.

During the year, in addition to the maintenance of the existing trunk roads, the system of cleared main roads was materially extended. It is needless to enlarge upon the sanitary benefits arising from these roads, when it is realised that many of them traverse fly-belts.

Several native towns and areas, known to be visited by sleeping sickness, were finally evacuated, the inhabitants either going to other towns, or establishing new settlements in fly-free regions.

Arrangements were made for the protection, by wire gauze compartments, of travellers making their way up and down the river Benue on barges. Those

arrangements were made after the river had fallen so low as to be unfit for navigation by steamers.

Direct instruction was given to numerous District Headmen and their notables touching public measures, within their existing power to take, for the prevention of the commonest diseases in their various localities. In this connection, as showing that such instruction had not been entirely falling on barren ground, it is interesting to note that, despite the necessary cessation of much of the normal medical activity, the number of natives who submitted themselves to vaccination was materially increased, and that in some instances more presented themselves than it was possible to deal with. In one large division all the potentates who had been interviewed promised to make all their people, who had not had small-pox, submit themselves to vaccination so soon as the Government could spare the services of a travelling Medical Officer for the purpose.

Unfortunately the war broke out shortly thereafter; but there is every reason to believe that they will repeat, and eventually implement, the promise when the appropriate time arrives.

Several instances were recorded of headmen having refused the entry to their towns of strangers known to be suffering from venereal disease.

The prevalent diseases of cattle and other live-stock, up and down the country, were taken in hand by the Veterinary Branch of the Department of Agriculture.

The likelihood of the question of reafforestation in the northern districts being taken up by forestry experts at an early date was adumbrated.

The systematic laying-out of the surroundings of every railway station assured their future settlement in approved sanitary fashion, and precluded the mistakes of the past being repeated thereat. This was most important, considering the rapidity of settlement around certain railway centres.

The laying down of Dhub was extended at various stations; and at numerous native towns the protection of their peripheries, by the planting of short crops, was extended.

A beginning was made with the clearing of some foci of sleeping sickness at remote spots on the river Benue, beyond the immediate supervision of Medical Officers.

The use of the salga and the disposal of combustible rubbish by burning were introduced to various places at which sanitary practice had been nebulous till then.

A greater number of people than was formerly the case began to give evidence of harbouring misgivings touching the quality of animals slaughtered and meat offered for sale at the markets. As such misgivings had not been prompted, so far as was actually known, by Medical or Sanitary Officers, this may be regarded as a piece of intrinsic material sanitary progress.

Visits paid in person by His Excellency the Governor-General not only to stations on the railway such as Kaduna, Zaria, Kano and Naraguta but to such cross-country places as Sokoto and Katsini also, brought home to the people that no community was too remote to elude the direct personal interest of the highest authority. Such policy has an enduring effect in quickening the local influence of Medical and Sanitary, like other, Officers.

(II.)—PREVENTIVE MEASURES.

(i.)—MOSQUITO AND INSECT-BORNE DISEASES.

MALARIA.

During the year, 2,157 cases were treated for malarial affections, an increase of 219 over the previous year, when the cases treated numbered 1,938.

Of the 400 European cases treated, one ended fatally; of the 1,757 native cases, 24 were fatal.

The 400 European cases show an increase of 30 over the previous year, while the 370 European cases of the previous year had shown an excess of 61 over 1912.

The explanation of the figures shown above need not excite alarm, for the true interpretation probably consists in the progressively freer invocation of medical aid by both Europeans and natives, and in the progressive increase of inexperienced European immigrants.

The precautions taken against the activities and increase of mosquitoes, described in former reports, were continued, and, if anything, during the first seven months anyhow, amplified.

Practically all official Europeans are provided with so-called mosquito-proof rooms; and, during the year, supplies of coal tar were sent to most bush stations, for the purpose of protecting the wooden frames of those rooms from the ravages of white ants.

The use of the mosquito net still continues to spread among natives and non-European aliens; and specific requests for quinine—by name—are tendered by them much more frequently than was the case formerly.

The prosecutions instituted in the European courts for sanitary offences are probably very small in number, compared with those dealt with by native courts, together with non-judicial native authorities.

Not so very long ago, if a well-known European resident failed to keep an appointment and advanced a "go" of fever as his apology, it was taken as a matter of course; but now the same type of man being laid up with malarial fever causes surprise and excites remark.

TRYPANOSOMIASIS.

Seven cases of this infection were treated during the year; two in Europeans and five in natives. Both Europeans were invalided home, and one of the natives died of sleeping sickness.

Both Europeans—one a Military, the other a Medical Officer—contracted the infection on the Benue. The Medical Officer had himself done a lot of useful work in the investigation of sleeping sickness.

At the end of the year the Sanitary Officer went up the river Benue to investigate the incidence of the pest and to devise means for mitigating it.

Nothing approaching a just estimate of the amount of human trypanosomiasis present in the country has ever been made; the data necessary for such an estimate have never been obtainable by the investigators available.

YELLOW FEVER.

One case, a fatal one, occurred at Jebba. The victim was a European. It is no longer possible to utter the proud boast that yellow fever has never been known in the Northern Provinces, for the diagnosis of the case in question has been accepted.

But the case was and remains a most puzzling one ; no other case was known to exist at Jebba, although cases were being looked for. Careful scrutiny, after the death, failed to reveal even another suspected case ; the victim had not been outside of the Northern Provinces for months before he was attacked ; and it seems reasonable to speculate on the possibility of the existence of unconscious yellow fever carriers, of the same type as the unconscious diphtheria or typhoid carrier.

The possibility of a European carrying the infection about with him for months before being attacked by the disease might explain this case, for the sufferer had been in the Southern Provinces some months before he was attacked. Again, there may be, in Jebba, natives from the South who carry the parasite, but never themselves suffer from clinical signs of yellow fever.

One of the two suggestions must be the correct one.

Stringent precautions are taken at Jebba against the *Stegomyia fasciata* ; all Europeans are protected by mosquito-proof rooms ; and the Department of Public Works has always a supply of such rooms ready, in which to isolate suspected cases.

The Medical Officer at Jebba is also the local Magistrate, so that he has very full powers.

FILARIASIS.

Eleven cases, none of them fatal, were treated in natives. Of course this number gives no idea of the prevalence of this disease in the country.

(ii.)--EPIDEMIC DISEASES.

Plague and cholera have yet to be found in the Northern Provinces.

ENTERIC FEVER.

One fatal case occurred in a European railway official at Kaduna Junction.

No cases were reported in natives during the year, although thirteen had been reported the previous year.

SMALL-POX.

For this disease 438 natives were treated, of whom 91 died.

Of course these figures do not touch the fringe of the prevalence of the disease, for only a tiny number of the cases comes to the knowledge of the Medical Department.

Until what time it shall have become possible to set several Medical Officers apart for vaccination and sleeping sickness investigation exclusively, little permanent progress can be hoped for in the direction of stamping out small-pox.

That this time may come soon is the earnest hope of every enlightened friend of this country, for there can be little doubt that small-pox effects as much havoc among the natives now as war and slave-raiding used to.

The reason for this is not far to seek; the ending of slave-raiding and internecine wars has rendered intercommunication safe and has encouraged the spread of communicable disease.

Despite the advent of war, 17,504 vaccinations were performed, an increase of 3,588 over the previous year.

Of the vaccinations performed, 13,975 were successful; so that the number of successful vaccinations performed in 1914 outnumbered by 59 the total vaccinations—successful and unsuccessful—of 1913.

DYSENTERY.

Sixty-six Europeans and 747 natives were treated for this disease, and 130 of the natives died.

These figures show a very material increase on those of the previous year.

It is easy to account for the increase among the natives. The native cases were largely drawn from labour camps, where the sufferers were brought under medical notice; while until the harvest had been gathered in and normal plenty had thus been restored after the scarcity mentioned above, many suffering and starving natives had been aggravating their intestinal ailments by eating crude raw grain.

It is difficult to explain the increase among the Europeans; but it is a fair inference that, when an increase of native cases occurs, infection must be more widely disseminated. Now Europeans eat salads; when infection is more widely disseminated, salads are more liable to be dangerous; and there can be little doubt that the majority of Europeans affected acquire the infection from this source. This renders attempts at stamping out the disease, among Europeans, rather hopeless; for, as mentioned in a former report, to ask the average Englishman to give up salads is to ask too much of his form of human nature.

All available care is taken to safeguard water supplies, and education touching water-borne diseases is continually offered to the natives—successfully in some cases only.

PNEUMONIA AND INFLUENZA.

Four Europeans were treated for pneumonia and eight for influenza. Among the natives 197 cases, 57 of them fatal, were treated for pneumonia; and 24, one of them fatal, for influenza. In the natives, as formerly reported, these diseases are nearly always spread by overcrowding.

PYREXIA OF UNCERTAIN ORIGIN.

Under this heading, 5 European and 19 native cases were reported.

Some of these, no doubt, represent failures to diagnose known fevers; while others probably represent fevers which, so far, remain unclassified.

(iii.)—ENDEMIC DISEASES.

TETANUS.

There were three native cases, all of them fatal. As in the case of many other diseases, only a moiety of the cases of tetanus ever reaches the European medical man. The reason for this has been explained before.

RHEUMATISM.

European cases were 13; native 136, one of them fatal. Cardiac affections of rheumatic origin are quite common among our natives.

TUBERCULOSIS.

There were 14 native cases, 7 of which were fatal. The disease is, unfortunately, gaining a footing. Little can be done to stop it, under existing conditions, beyond observing the precautions formerly described. There is reason to believe that open air treatment, combined with generous feeding, has quite as good an effect here as it has in Great Britain.

YAWS.

Thirty-seven native cases were treated for this disease.

VENEREAL DISEASE.

Of these diseases 1,749 cases were treated; 8 natives died of syphilis, and one native of the effects of soft chancre. Of course these figures give no indication of the wide distribution of the pests under this heading.

The methods of prevention, formerly described, are steadily persisted with, and so much has been written on the subject before that it seems superfluous to enlarge on it here.

NEW GROWTHS.

Ten native cases were treated for New Growths; all of them were returned as malignant; 5 carcinomata and 5 sarcomata.

(iv.)—HELMINTHIC DISEASES.

ANKYLOSTOMIASIS.

Two hundred and seventy-seven natives, of whom 11 died, were treated for this invasion. Touching its prevalence, a report has been submitted by the Principal Medical Officer.

All the means, of which they can secure the application, are taken by the Medical Officers to combat this invasion at their respective stations; hospitals, prisons, soldiers' and police lines and their surroundings receiving special attention. The most approved methods of treatment are insistently urged by the Principal Medical Officer. The Sanitary Officers, in the course of their travels, lose no opportunity of educating representative natives on the subject, and an increasing number of the Political Officers are using their unrivalled opportunities in the same direction.

BILHARZIA.

Fifteen native cases were treated, with one death. Among the natives this affection is often confounded with dysentery on the one hand, and with gonorrhœa on the other.

GUINEA WORM.

Of the many thousands of natives invaded, 966, of whom one died, were treated. The preventive measures here come under the education of the natives in water-borne diseases.

OTHER HELMINTHIC DISEASES.

These appear in the tables, and it does not seem expedient to add anything to what was written on the subject last year.

(III.)—GENERAL MEASURES.

SEWAGE DISPOSAL.

Among the European community, sullage water is generally utilised in the gardens. The non-Europeans at Government stations are undesirably casual in the way they treat it, and there can be no doubt that among them it would become a sad nuisance were it not for the constant war waged against puddles by the authorities.

Fortunately, percolation is free at most places, and, in the majority of cases, the nature of the ground lends itself to the satisfactory disposal of this water. Washing of persons, clothing and utensils is generally conducted at water resorts more or less remote from the houses; and, as the people concerned are not on the outlook for avoidable work, wonderfully little water is carried to the houses.

Touching the disposal of ordure, water is not used, save at Lokoja and Baro, where the contents of latrine buckets are dumped into the Niger.

The use of the earth-closet is universal among Europeans, among whom it works admirably, no nuisance ever arising, except in the case of a few perverse persons who will use sand, instead of dry earth, for covering the contents of the buckets.

For the servants of Europeans, and for the inhabitants of the non-European alien quarters of Government stations, and likewise for the inmates of Government prisons and hospitals, the bucket system is generally used; and, less often, the salga. The salga, where the ground is suitable, works so much better than the bucket system that its use is being extended wherever possible.

The contents of all buckets are trenched daily—never used as manure.

Salgas also are rapidly replacing buckets at soldiers' and police lines. At camps, and at areas to which shifting people frequently resort for trade and the like, trenches daily covered in or salgas frequently renewed are used; and, at a very few places—Lokoja is the only permanent instance of the sort—a few buckets are used, because their use is unavoidable, although not permanently so.

In the native towns of the North, the salga is an indigenous institution; elsewhere the salga is increasingly used; the trench is sometimes used; but in a large number of primitive towns, sanitary measures are conspicuous by their absence. It is needless to say that it is from such towns that the great majority of cases of ankylostomiasis come originally; this is almost certainly so, although at this stage the fact cannot be demonstrated statistically.

It seems probable that a water-borne system of sewerage will, eventually, be instituted at Kaduna. If this come about, the sanitarian will observe the experiment with great interest; if it turn out perfectly successfully in every respect, it will be a Godsend; if not, a calamity.

DISPOSAL OF REFUSE.

At all Government stations, combustible rubbish is burnt and non-combustible buried daily; the burning, as a rule, being effected in incinerators. Of course, horse-dung and stable litter are included under combustible rubbish.

At many native towns the same methods are being adopted, except that there the droppings of live-stock are carried to the farms for manure.

Of course it will be understood that at many native towns, probably the majority, little or no method is practised. The redeeming feature about native towns, however, is that, once a sound method which commends itself to the notables thereof has been adopted, the Native Authorities can be depended upon to make its use practically automatic; they have their own sound ways of effecting this result.

WATER SUPPLY.

There is little new to mention about water supply. As mentioned, during the year a temporary piped supply was laid on at Kaduna. The eventual permanent supply will be a filtered gravitation one, piped from a high-level reservoir.

Constant efforts are being directed to the improvement of water supplies, and, where effort is relaxed, the reason is a temporary one which affects the whole Empire.

DRAINAGE.

The nature of the drainage and the methods used for promoting its efficiency are as described in former reports.

CLEARANCE OF BUSH, UNDERGROWTH, &c.

The methods by which this is effected have been fully described before.

During the year steady progress was made in the extension of Dhub grass at many places, and the principle of planting short crops around inhabited places was constantly pressed.

When trypanosomiasis shows itself in a region where the expense and difficulty of effective clearing are prohibitive, every effort is made to induce the people to emigrate to fly-free localities.

(B)—MEASURES TAKEN TO SPREAD KNOWLEDGE OF HYGIENE AND SANITATION.

LECTURES.

As before stated, courses of lectures are not given. Practical teaching, copiously illustrated, is given on the spot, so far as possible.

For reasons which may be inferred from remarks made above, much less of this teaching was given during the year than had been planned originally.

Political, Medical and Sanitary Officers all take part in this teaching, as their respective avocations afford them opportunity.

There is unlimited scope for such teaching, for the majority of the influential members of the indigenous native population are very receptive of it.

Despite the incidental impediments, several Medical Officers made fruitful tours of instruction in their respective districts during the year.

SCHOOL TEACHING.

Elementary hygiene constitutes an integral part of the curriculum of the central Government schools at Nassarawa, and it is being included in the curricula of the Provincial Government schools, as they become going concerns.

A small monograph on the subject, printed in the vernacular and designed to appeal to the native point of view, figures as one of the recognised text-books at all the schools.

It is hoped that, eventually, all recruits for training as Sanitary Inspectors will be obtained from among the former pupils of the Government schools. Medical Officers could not be spared during the year to give part of their time to teaching in the schools.

(C)—RECOMMENDATIONS FOR FUTURE WORK.

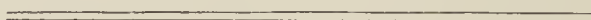
It would be hollow and pretentious to table recommendations for future work when so much desirable work is actually in view, which, for the time, cannot be got at.

Last year's programme was not completed, and much of the work indicated in the Report for 1913 remains to be done.

The obvious policy is to keep up with routine work and to overtake arrears so soon as possible.

M. CAMERON BLAIR,

Senior Sanitary Officer.



IV.—METEOROLOGY.

Owing to the fact that many Medical Officers were on active service on the Cameroon Frontier, the meteorological records for the year are incomplete in the following stations :—

Geidam, Katagum, Nafada, Ibi, Ankpa and Kontagora.

This makes comparison of the average annual rainfall somewhat difficult, as it was during the rains that the records ceased.

Generally speaking, however, there was again a remarkable shortage of rain, and the average for the Northern Provinces, as shown by the following table, was 28·78 inches, against 31·50 inches in 1913.

Table showing rainfall in inches.

		YEAR.										AVERAGE TO 1913.	RAINFALL 1914.
		1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.		
Zungeru	...	51·10	41·31	60·39	37·16	48·78	58·89	53·44	42·90	29·93	35·17	45·90	33·46
Lokoja	...	41·72	49·64	51·83	36·68	44·12	65·14	45·59	41·57	46·74	34·76	45·77	42·81
Kano	...	...	36·69	38·12	27·55	34·86	49·03	26·81	40·00	29·20	19·05	33·47	19·06
Zaria	...	...	51·27	61·05	29·80	45·48	55·88	53·80	43·35	43·13	33·01	46·30	35·64
Yola	...	33·77	42·76	34·60	27·55	53·77	44·26	38·67	42·22	38·93	29·93	38·64	27·83
Sokoto	..	32·14	33·32	...	19·86	20·44	29·72	23·11	28·70	19·16	16·38	24·76	24·94
Ilorin	...	...	47·02	49·00	54·74	55·46	65·18	51·14	52·58	38·85	43·83	50·86	42·83
Ibi	...	...	...	23·49	...	...	53·30	49·63	36·38	46·10	43·42	42·05	23·75
Geidam	...	...	...	...	...	22·39	21·28	16·87	10·46	12·59	5·76	14·89	19·30
Maiduguri	...	...	...	...	...	23·30	31·89	19·53	30·00	18·38	13·98	22·84	11·49
Kontagora	...	...	46·28	58·40	37·28	51·15	60·67	53·01	54·09	32·83	36·27	47·77	6·54
Ankpa	...	...	...	...	...	58·77	66·85	56·44	...	47·81	49·78	55·93	19·57
Nafada	...	..	...	...	...	...	37·27	33·24	30·32	22·01	16·58	27·88	22·28
Birnin-Kebbi	...	...	...	...	...	...	27·70	25·10	30·69	20·32	23·37	25·43	21·77
Katagum	...	...	...	...	...	23·70	23·03	18·21	19·96	20·50	13·81	19·87	9·54
Bauchi	...	...	...	42·24	...	47·88	43·23	38·86	48·79	35·83	33·89	41·53	45·16
Baro	...	...	...	...	...	46·46	55·77	47·98	46·14	43·51	39·50	46·56	32·33
Naraguta	...	...	...	...	...	...	...	...	57·84	47·33	51·37	52·18	59·17
Womba, etc.	...	...	...	...	19·11	...	49·02	44·40	40·45	35·95	58·94	41·31	49·40

Other figures of interest are as follows :—

				Reading.	Date.	Station.
Highest shade temperature	...	...		115	April	Maiduguri
Lowest shade temperature	...	...		45	November	Zaria
Highest mean temperature	...	...		100·5	December	Katagum
Lowest mean temperature	...	...		61·4	„	Naraguta
Maximum total rainfall	...	...	...	59·17	„	Naraguta
Minimum total rainfall	...	...	...	6·54	„	Kontagora
Maximum rainfall on one day	...	...	...	4·47	August	Kano
Greatest range of temperature	...	...		60	March	Geidam
Highest mean relative humidity	...	...		93	February	Lokoja
Lowest mean relative humidity	...	...		21	March	Maiduguri

V.—HOSPITALS AND DISPENSARIES.

The number of Europeans admitted to the hospitals at Zungeru, Lokoja and Kaduna during the year was 236, of whom 8 died.

Five thousand seven hundred and fifty-two natives were admitted to the various hospitals throughout the Northern Provinces, and the deaths numbered 346.

The Table on pages 33–38 gives the details of all cases treated, and the summary added thereto shows the distribution of such admissions and deaths.

The necessity for a small well-equipped European hospital at Kano became more apparent during 1914, and it is hoped to establish a temporary hospital there during the coming year.

The hospitals at Zungeru, Lokoja and Kaduna continue to be conducted in a highly efficient manner, and their administration leaves nothing to be desired.

The total number of out-patients treated during the year, compiled from returns received from out-stations, was :—

Europeans : 1,242, with 6 deaths ;
Natives : 22,521, with 296 deaths.

The corresponding figures for 1913 were :—

Europeans : 1,336, with 4 deaths ;
Natives : 22,385, with 318 deaths.

Three dispensaries are maintained, under the supervision of the Medical Officer of the District, by Native Treasuries, and, had it not been for the outbreak of war, other such institutions would have been established during the year.

The diseases treated during the year, as recorded in the Tables on pages 33–48, are, generally speaking, of the usual nature and in the average proportion. The following, however, appear to call for brief comments :—

(a) EUROPEAN PATIENTS.

Comparative Table showing admissions (all diseases) by months for the past five years.

Month.	1910.	1911.	1912.	1913.	1914
January	68	68	80	123	83
February	66	79	84	132	98
March	89	75	80	120	107
April	61	69	84	100	109
May	70	60	92	126	125
June	79	64	108	147	135
July	84	66	114	132	170
August	90	77	84	130	142
September	105	69	124	122	133
October	115	83	114	136	180
November	74	99	115	146	105
December	127	103	104	121	91
Total	1,028	912	1,183	1,535	1,478

MALARIA.

There were 400 Europeans treated for malaria during the year, of whom one died. The number of cases is 30 more than the number treated during 1913, but the average population was greatly increased, which more than counteracts the figures.

Regarding anti-malarial precautions in the Northern Provinces, I can only repeat that as time goes on natives as well as Europeans are gradually but surely becoming more aware of the importance of lending their personal aid in the rigorous campaign which the sanitary authorities are continuously waging against the mosquito.

DYSENTERY.

Sixty-six Europeans were treated during 1914, being an increase of 27 over the number in 1913.

There were no fatal cases.

In only 8 cases was the disease of a severe enough character to necessitate invaliding. The majority were bacillary in character, quickly yielding to routine treatment.

I cannot give any satisfactory explanation of the increase in this disease. The list of the names of those affected shows that the large percentage were men constantly travelling and consequently unable to obtain always a supply of the sterilized water obtainable at the majority of the larger stations.

DIPHTHERIA.

Four Europeans suffered from this disease during the month of January. They were all of one Department and stationed together. The first case proved fatal, and as he had only been in the country a few days and had suffered from a nasal discharge on the outward voyage, there is little doubt that the infection was imported by him.

Fortunately we were able to get a supply of anti-diphtheric serum up to Kano in time to treat the three subsequent cases, all of which recovered.

I may add that a constantly renewed supply of various vaccines is now supplied to certain fixed centres for distribution when required.

DISEASES OF THE NERVOUS SYSTEM.

For these diseases 56 Europeans were admitted, and 17 cases necessitated invaliding (7 for neurasthenia and 4 for neuritis).

It may not be out of place to here draw the attention of the Executive to the danger of leaving officials of a certain temperament too long a time by themselves in what is known as a "one-man-station." Men so constituted are apt to become morbidly introspective and suffer from insomnia, neurasthenia, etc., with the not infrequent result of over indulgence in drugs or alcohol.

Nor are these always the class of case which are inclined to seek medical advice, but rather avoid communicating with the medical men stationed in their province: *i.e.*, from a professional point of view.

TRYPANOSOMIASIS.

Two European officials, one Medical Officer and one Military Officer, both of whom had been on active service in the vicinity of the River Benue, were invalided during the year.

The Sanitary Officer was engaged at the end of the year investigating the prevalence of this disease. In order to do so he made an extended tour of the various towns on the banks of the Benue between Ibi and Yola, particularly noting at which places the *Glossina* was most abundant.

Owing to the fact that two Europeans had become infected in the same area and at a similar period it was thought necessary to advise the Executive temporarily to close this route, which was accordingly done, and the longer, but less dangerous, overland route used for the time being. When it became known in which areas the fly was particularly prevalent and that it was diminishing or absent in most other parts of the Benue, the river-route was

again opened for transport, with the precaution taken of making the barges used fly-proof.

Happily no further cases occurred.

DISEASES OF THE DIGESTIVE SYSTEM.

There were 339 Europeans treated for the various diseases of the Digestive System.

Oral Sepsis.—Owing to the fact that this condition is becoming so alarmingly frequent amongst Europeans in Nigeria, it had been my intention to have circularized Medical Officers with a view to obtaining some reliable statistics on the matter, but, owing to existing circumstances, I have not yet been able to do so. Patients affected with pyorrhœa are usually returned on the sick-lists as suffering from gastritis, anæmia, etc., the real cause of the trouble being the systemic infection following a continuous production of pus in the alveolus, and now of course it is generally recognised that such a focus may cause acute or chronic disease in the most remote organs.

The interesting point is—does the disease take a more active form in this country? Personally I am inclined to think so.

(b) NATIVE PATIENTS.

SMALL-POX.

During the year there were 438 cases treated, and of these 91 died.

The famine in the northern portion of the Kano province, which was at its worst during the dry season of 1914, was undoubtedly the cause of the greatly increased death rate resulting from this disease.

I may here remark that an extended trial was given in Kano to native vaccinators, *i.e.*, not educated Coast natives, but Mahommedans belonging to the northern Emirates—an experiment which I stated in my 1913 report was then under consideration. I attach extracts from a report by the Senior Medical Officer, Kano, from which it will be seen that the attempt was not attended with success.

This solitary instance should not discourage us, however, as it is more than probable that when we are in a position to train natives of the same class, who have already been educated under the supervision of Europeans, a more satisfactory result may be looked for.

The Senior Medical Officer, Kano, writes:—

“ I am unable to report favourably on the progress the native
“ vaccinators have made. A Medical Officer took the men down to the
“ city gaol yesterday to perform vaccinations under his supervision. He
“ informs me that not one of the men performed the operation with
“ sufficient care.

“ They are not lacking in intelligence and are good specimens of
“ their class, but, as I consider is the case with the vast majority of
“ Hausas, they are lacking in the power of paying attention to petty and
“ apparently unimportant detail, which is so essential in all medical work.”

DYSENTERY.

Seven hundred and forty-seven natives were treated, of whom 130 died. The general debilitated condition of the natives resulting from famine was, as in the case of small-pox, no doubt the cause of the high death-rate.

LEPROSY.

One hundred and eighty-eight cases were admitted to the leper camps during the year, making a total under treatment of 972, of whom 124 died.

The outbreak of war upset the routine of medical arrangements at these camps and also interfered with the segregation system's advance.

ANKYLOSTOMIASIS.

Two hundred and seventy-seven cases were treated, eleven died.

A full report has already been submitted on the prevalence of this infection and the methods of prevention.

VI.—SCIENTIFIC.

The investigation of various Entozoa affections was effectually carried out by the Medical Officers throughout the Northern Provinces, but, for obvious reasons, was practically suspended after the month of August, as the stations where most work of this nature is undertaken were either without Medical Officers altogether, or, in those in which two Officers were usually employed, the one man remaining had not the time at his disposal.

I have consequently no special reports from individual officers to attach, with the exception of two already submitted in January last, on the subject of ankylostomiasis.

F. MANNING,

*Principal Medical Officer,
Northern Provinces.*

ZUNGERU,

30th August, 1915.

VACCINATION RETURN FOR THE YEAR 1ST JANUARY TO
31ST DECEMBER, 1914.

Station.							Number vaccinated.	Number successful.	Number failed.
Zungeru...	...	...	...	...	...	...	485	424	61
Lokoja ...	...	...	...	...	...	...	725	322	403
Kaduna ...	...	...	...	...	...	...	1,062	842	220
Kano ...	...	...	...	...	...	...	1,000	858	142
Zaria ...	...	...	...	...	...	...	220	97	123
Yola ...	...	...	...	...	...	...	193	168	25
Bauchi ...	...	...	...	...	...	...	1,169	1,066	103
Ilorin ...	...	...	...	...	...	...	1	—	1
Sokoto ...	...	...	...	...	...	...	389	307	82
Geidam ...	...	...	...	...	...	...	1,612	1,430	182
Katagum ...	...	...	...	...	...	...	307	266	41
Maiduguri ...	...	...	...	...	...	...	3,840	3,387	453
Kontagora ...	...	...	...	...	...	...	205	50	155
Womba ...	...	...	...	...	...	...	968	886	82
Birnin-Kebbi ...	...	...	...	...	...	...	2,476	2,265	211
Naraguta ...	...	...	...	...	...	...	473	377	96
Nafada ...	...	...	...	...	...	...	79	72	7
Baro ...	...	...	...	...	...	...	79	59	20
Minna ...	...	...	...	...	...	...	730	66	664
Ibi ...	...	...	...	...	...	...	301	167	134
Ankpa ...	...	...	...	...	...	...	237	200	37
Abinsi ...	...	...	...	...	...	...	278	191	87
Jebba ...	...	...	...	...	...	...	121	76	45
Offa ...	...	...	...	...	...	...	209	136	73
Kabba ...	...	...	...	...	...	...	81	63	18
Katsena ...	...	...	...	...	...	...	189	147	42
Railhead (Jengre, etc.)	...	...	...	...	...	...	18	10	8
Kakuri ...	...	...	...	...	...	...	57	42	15
							17,504	13,974	3,530
Total percentage of successful cases ...								79·8	20·1

RETURN SHOWING THE STAFF EMPLOYED.

Office.	Name.	Remarks.
Principal Medical Officer ...	Manning, F. ...	Transferred from the Gambia, 1st January.
Deputy Principal Medical Officer	Chartres, E. A. ...	
Senior Sanitary Officer ...	Blair, M. C. ...	Transferred to Gold Coast on promotion, 3rd December.
Provincial Medical Officer	Watson, C. F. ...	
" " " "	Gordon-Hall, W. H. A. ...	Transferred to Gold Coast as Sanitary Officer, 27th May.
Senior Medical Officer ...	Watson, C. E. S. ...	
" " " "	Lobb, H. P. ...	Pensioned on account of ill health.
Junior Sanitary Officer...	Foy, H. A. ...	
Medical Officer ...	Twomey, G. R. ...	Resumed duty from pension list, 4th March, 1914.
" " ...	McKinney, H. G. ...	
" " ...	Chesnaye, F. W. ...	Transferred to Southern Provinces as Sanitary Officer, 29th March.
" " ...	Adams, E. C. ...	
" " ...	Parsons, A. C. ...	Transferred to Southern Provinces as Sanitary Officer, 1st August.
" " ...	Ellis, M. F. ...	
" " ...	Norman, G. B. ...	Transferred from Southern Provinces, 18th February, and retired 14th September.
" " ...	Costello, C. T. ...	
" " ...	Dalziel, J. M. ...	Transferred from Sierra Leone, 22nd March.
" " ...	Williams, R. F. ...	
" " ...	Inness, W. D. ...	Transferred from Sierra Leone, 28th November.
" " ...	Swann, A. J. T. ...	
" " ...	Moiser, B. ...	Employed at Medical Research Institute, Yaba, until 30th Nov.
" " ...	Pirie, G. J. ...	
" " ...	McLeay, C. W. ...	Transferred from Gold Coast, 9th September.
" " ...	Pollard, J. M. W. ...	
" " ...	Trumper, W. A. ...	Killed in action, 27th August.
" " ...	Bissell, F. E. ...	
" " ...	McCay, F. W. ...	Non-Commissioned Officers, R.A.M.C., employed.
" " ...	Porteous, E. J. ...	
" " ...	Allin, J. R. P. ...	Resigned, 19th June.
" " ...	Lindsay, J. ...	
" " ...	Jeffreys, H. C. ...	Resigned, 19th June.
" " ...	Rollason, G. ...	
" " ...	Crichton, A. J. M. ...	Resigned, 19th June.
" " ...	Davies, L. W. ...	
" " ...	Courtney, B. J. ...	Resigned, 19th June.
" " ...	Percival, B. A. ...	
" " ...	Willan, R. ...	Resigned, 19th June.
" " ...	Thomson, J. W. ...	
" " ...	Bower, W. C. E. ...	Resigned, 19th June.
" " ...	Cobb, W. G. ...	
" " ...	Johnson, W. B. ...	Resigned, 19th June.
" " ...	Nolan, R. H. ...	
" " ...	Doudney, L. ...	Resigned, 19th June.
" " ...	Black, P. W. ...	
" " ...	Johnston, J. E. L. ...	Resigned, 19th June.
" " ...	Sharp, N. A. D. ...	
" " ...	Hogan, J. C. C. ...	Resigned, 19th June.
" " ...	Beattie, J. A. ...	
" " ...	Benson, J. M. ...	Resigned, 19th June.
" " ...	Pearson, C. J. H. ...	
" " ...	Wood, B. W. F. ...	Resigned, 19th June.
" " ...	Digby, W. E. S. ...	
" " ...	Hanington, J. W. B. ...	Resigned, 19th June.
" " ...	Fraser, T. P. ...	
" " ...	Watt, J. T. ...	Resigned, 19th June.
Two Staff Sergeants and Twelve Sergeants	—	
Male Nurse ...	Vincent, J. W. ...	Resigned, 19th June.
2 Senior Nurses...	Ward, Miss M. A. ...	
	Clark, Miss J. A. ...	Resigned, 19th June.
	Taylor, Miss E. ...	

RETURN SHOWING THE STAFF EMPLOYED—*continued*.

NATIVE STAFF.

Office.	Name.	Remarks.
12 Nurses		
3 Dispensers, Class II. ...	Roberts, C. E.	
	Nicoll, J. J.	
	Coker, S. J.	
2 Dispensers, Class III. ...	Watson, T. J.	
	Anthony, I. N.	Transferred from Marine, 1st Jan.
4 Clerks, Class I.	Eshun, J. F....	
	Williams, E. A.	
	Benin, E. P....	
	Sam, J. S.	Transferred from Political Department, 27th June.
1 Clerk, Class II.	Addo, E. E. K. O.	Transferred from Judicial Department, 1st January.
20 Dressers		
3 Headmen of ambulance ...		
36 Ambulance bearers		
25 Dispensary attendants ...		
4 Messengers		
3 Cooks		
3 Head ward-servants		
8 Ward-servants		
3 Medical orderlies		
1 Storeman		

TRANSFERRED FROM SOUTHERN PROVINCES AND EMPLOYED TEMPORARILY.

Medical Officer	Kelsall, C.	4th July to 21st November.
„ „	Pasley, C. J. B.	29th June to 7th October.

EXPENDITURE.

MEDICAL.

	£	s.	d.
Personal emoluments	32,191	3	5
Drugs, instruments, books and appliances	1,812	6	11
Hospital and camp equipment	288	15	1
Medical comforts	142	11	1
Hospital diet and provisions	675	0	11
Light, fuel, etc.	83	16	3
Horse allowances... ..	1,503	0	5
Travelling allowances	688	8	9
Passages	2,785	9	2
Outfits for medical subordinates	152	14	2
Outfits for Medical Officers	24	0	0
Outfits for Nurses	108	0	0
Medical examination of officers in England	138	12	0
Expenses of N.C.O.'s and Nurses travelling in England	46	2	0
Scientific instruments and appliances	100	2	8
Expenses of Medical Officers and Nurses at Tropical School of Medicine and fees on engagement of Nurses	262	15	7
Fees for courses of study for promotion of Medical Officers	37	9	6
Expenses in connection with isolation hospitals	9	14	9
Expenses in connection with research work	183	15	7
Vaccination expenses	625	17	6
Extra medical assistance... ..	35	18	4
Recording vital statistics	11	1	6
Fees to Medical Officers for post-mortem examinations	118	13	0
Share of expenditure, Advisory Medical and Sanitary Committee	44	8	11
Non-effective charges for R.A.M.C. Sergeants	140	4	2
Bush allowances	285	5	0
Total ...	£42,495	6	8

SANITATION.

	£	s.	d.
Personal emoluments	2,064	13	6
Horse allowance	57	0	0
Travelling allowance	47	15	0
Passages	92	8	0
Kerosene and disinfectants	217	12	4
Disinfectants for native prisons	137	15	4
Laboratory, equipment and upkeep	85	9	3
Labour for bush clearing at outstations	431	19	8
Sanitary improvements	55	9	2
Total ...	£3,190	2	3

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1914.

DISEASES.	EUROPEANS.						NATIVES.					
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.		
INFECTIVE DISEASES :—												
Blackwater fever	11	11	3	6	...	...	...	...	...	...	...
Beri-beri	4	4	1	...	2
Chicken-pox ...	1	...	1	...	...	...	1	22	23	...	...	...
Cow-pox	1	1	2	...	...	...
Dysentery... ..	1	18	19	...	5	...	4	422	426	94	...	2
Enteric fever	1	1	1	...	...	...	...	...	...	...	...
Enteritis, infective	1	1	1	...	...
Gangrene	1	2	3	1	...	...
Gonorrhœa	23	711	734	...	...	26
Influenza	1	1	...	...	...
Mycetoma	1	...	1	...	...	...
Malaria ...	1	69	70	1	1	...	1	575	576	9	...	6
Measles	3	3	...	...	...
Mumps	1	6	7	...	...	2
Pneumonia ...	1	1	2	...	...	...	4	88	92	28	...	2
Pyrexia of uncertain origin	1	1	...	...	...	...	3	3	...	...	...
Rheumatic fever	3	3	...	1	...	...	11	11	1	...	...
Septicæmia	3	3	3	...	...
Sleeping sickness	4	4	...	2	...	...	5	5	1	...	...
Small-pox	29	244	273	51	...	1
Syphilis	1	1	...	...	...	29	191	220	3	...	3
Tetanus	2	2	2	...	...
Tuberculosis	9	9	5	...	...
Yaws	11	11	...	...	1
Cerebro-spinal fever	1	1	1	...	...
Erysipelas	1	1	...	...	...
Leprosy	3	3	...	...	...
Madura disease	3	3	...	...	...
Pyæmia	4	4	3	...	...
GENERAL DISEASES :—												
Anæmia	5	5	...	2	...	...	7	7	3	...	...
Debility	10	10	...	1	...	...	31	31	5	...	...
Diabetes	1	1	...	...	...
INTOXICATIONS :—												
Alcoholism	1	1	...	...	...	...	...	...	...	...	...
Morphinism	1	1	...	1	...	...	...	...	...	...	...
NEW GROWTHS, NON-MALIGNANT :—												
Lipoma	2	2	...	...	...
Fibroma	1	1	...	...	...
Papilloma	2	2	...	...	...
Hæmangioma	1	1	...	...	...
Abdominal tumour	1	1	...	...	...
NEW GROWTHS, MALIGNANT :—												
Sarcoma	3	3	...	...	...
Carcinoma	4	4	...	...	...
CYST :—												
Ganglion	4	4	...	...	...

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1914—continued.

DISEASES.	EUROPEANS.						NATIVES.					
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.			Remaining on 31st Dec., 1914.	
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.		
EFFECTS OF PARASITES :—												
Trematoda :—												
<i>Bilharzia Hamatobia</i>	9	9	1	...	1
Cestoda :—												
<i>Tenia solium</i>	1	1	...	...	...	...	18	18	...	...	...
<i>Tenia saginata</i>	107	107	...	...	...
Not identified	1	...	1	...	...	...
Nematoda :—												
<i>Ascaris lumbricoides</i>	20	20	...	...	...
<i>Dracunculus medinensis</i>	11	269	280	...	...	7
Filariasis	5	5	...	...	...
Ankylostomiasis	158	158	10	...	4
<i>Oxyuris vermiculis</i>	7	7	...	...	...
Insecta :—												
<i>Pediculus</i>	10	10	...	...	...
Arachnida :—												
Hyphomycetes :—												
<i>Tinea trichophytina</i>	3	3	...	...	...
<i>Tinea circinata</i>	2	2	...	...	...
<i>Trichina spiralis</i>	5	5	...	...	...
<i>Tinea cruris</i>	1	1	...	...	...
<i>Tinea favosa</i>	1	1	...	...	...
Unclassified :—												
Craw-craw	1	49	50	...	...	...
Worm embryo, unknown
EFFECTS OF INJURIES :—												
Burns	2	20	22	1	...	...
Scalds	1	1	1	...	...	...	1	1	...	...	...
Sunstroke	5	5	...	...	...	...	7	7	1	...	...
Heatstroke	1	1	...	...	...	...	...	...	...	...	...
Abrasions	1	1	...	...	...	1	8	9	...	...	6
Contusions	2	53	55	...	...	3
Wounds	5	5	...	...	...	26	452	478	6	...	17
Wounds, gunshot...	...	2	2	...	...	...	1	29	30	1	...	9
Concussion of brain	1	1	1	...	...
Wounds, arrow	6	6	...	...	...
Sprains	2	21	23	...	...	1
Strains	2	2	...	...	...
Fractures	2	2	...	...	...	6	54	60	4	...	11
Dislocations	2	2	1	...	...
Displacement of cartilage	1	1	...	...	...	...	...	...	...	...	...
Starvation	9	9	8	...	...
EFFECTS OF FOREIGN BODIES :—												
In ear	1	1	...	...	...
In eye	1	1	...	...	...	...	1	1	...	...	...
In hand	1	1	...	...	...
EFFECTS OF POISONS :—												
Venom of snake	21	21	...	...	...
Venom of scorpion	6	6	...	...	...
Other stinging insects	2	2	...	...	...
Ptomaine poisoning	3	3	...	...	...	...	...	...	...	...	...
Irritant drug	1	1	...	...	...	...	1	1	1	...	...
Alcohol	1	1	1	...	...

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1914—continued.

DISEASES.	EUROPEANS.						NATIVES.				
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.			Remaining on 31st Dec., 1914.
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.	
DISEASES OF THE NERVOUS SYSTEM :—											
Neuritis	5	5	...	4	...	...	2	2	...	1
Meningitis	1	1	1	...	...	1	2	3	3	...
Paralysis	1	1	...	...	1	...	2	2	...	...
Chorea	1	...	1	...	...
Paraplegia	1	1	1	...
Epilepsy	1	1	...	1	...	...	2	2	...	...
Vertigo	1	1	...	...
Headache	1	1	...	...	...	...	6	6	...	...
Neuralgia	1	1	...	1	...	1	1	2	...	...
Neurasthenia	4	4	...	3	...	...	1	1	...	...
Mania	1	1	...	...
Mental stupor	1	1	...	1	...	...	...	...	...	...
Disseminated sclerosis	2	2	2	...
Cerebral hæmorrhage	1	1	1	...
Locomotor ataxia...	1	1	...	...
Hemiplegia	1	1	...	...
DISEASES OF THE EYE :—											
Conjunctivitis	4	116	120	...	1
Keratitis	1	1	...	...	...	...	1	1	...	...
Ulcer of cornea	14	14	...	...
Iritis	1	1	...	...	...	...	4	4	...	...
Entropion	1	1	...	...
Trachoma	1	1	...	...
Blepharitis marginalis	1	1	...	...
Sty	2	2	...	...
Glaucoma	1	1	...	...
Hypopyon	1	1	...	...
Cataract	2	2	...	...
Amblyopia	1	1	...	...
Panophthalmitis	1	1	...	...
DISEASES OF THE EAR :—											
Inflammation of external meatus	1	1	...	...	...	...	2	2	...	...
Accumulated wax, external meatus	1	1	...	...
Inflammation of middle ear	1	1	...	...	...	...	11	11	...	...
DISEASES OF THE NOSE :—											
Epistaxis	1	1	...	...
DISEASES OF THE CIRCULATORY SYSTEM :—											
Endocarditis	3	3	3	...
Valvular disease of heart, mitral	4	4	1	1	...	...	12	12	5	...
Valvular disease of heart, aortic	6	6	4	...
Aneurism	1	1	1	...
Syncope	2	2	2	...

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1914—*continued.*

DISEASES.	EUROPEANS.					NATIVES.					
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.			Remaining on 31st Dec. 1914.
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.	
DISEASES OF THE CIRCULATORY SYSTEM— <i>contd.</i>											
Double aortic disease of heart	1	6	7	1	...
Phlebitis	1	1	...	...	...	...	2	2	...	...
Arterio-sclerosis	1	1	...	...
Dilation, left ventricle	1	1	...	...
DISEASES OF THE RESPIRATORY SYSTEM :—											
Empyema	2	2	1	1
Asthma	1	1	...	...
Laryngitis...	5	5	...	...
Bronchitis, acute	1	1	...	...	...	7	90	97	2	2
Bronchitis, catarrhal ...	1	1	2	...	...	...	...	107	107	1	2
Broncho-pneumonia	1	19	20	4	...
Phthisis	4	4	3	...
Pleurisy	2	2	...	...	...	1	33	34	3	3
Cirrhosis of lung	1	1	1	...
Abscess of lung	1	1	...	...
DISEASES OF THE DIGESTIVE SYSTEM :—											
Stomatitis	2	2	...	...
Caries, dental	1	1	...	...	...	...	1	1	...	...
Inflammation of dental periosteum	4	4	...	1
Gum-boil	2	2	...	...
Toothache...	2	2	...	...
Volvulus	1	1	1	...
Tonsillitis	2	2	...	...	...	...	9	9	...	...
Pharyngitis	1	9	10	...	...
Gastritis	9	9	...	...	1	...	36	36	...	...
Pyorrhœa alveolaris	3	3	...	1
Indigestion	3	3	...	...	...	...	3	3	...	...
Gastralgia	3	3	...	...
Enteritis	7	7	...	1	...	1	16	17	5	...
Appendicitis	2	2	...	2	...	...	1	1	...	...
Colitis	4	4	...	2	...	...	38	38	4	...
Hernia, umbilical	1	1	...	...
Hernia, inguinal	1	12	13	...	...
Periproctitis	1	1	...	...
Diarrhœa	6	6	...	...	...	4	250	254	19	2
Constipation	2	2	...	...	...	1	39	40	...	...
Colic	1	1	...	...	...	1	36	37	...	...
Prolapse of rectum	1	1	...	...
Piles	9	9	...	...
Hepatitis	6	6	...	...	...	...	6	6	...	2
Congestion of liver	4	4	...	...	...	...	3	3	2	...
Cirrhosis of liver	1	1	...	...
Jaundice	1	1	...	...	...	...	4	4	...	...
Peritonitis	2	2	2	...
Dropsy	1	8	9	5	...
Ischio-rectal abscess	1	1	...	...	...	...	...	...	...	...

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1914—continued.

DISEASES.	EUROPEANS.						NATIVES.					
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.		
DISEASES OF THE LYMPHATIC SYSTEM :—												
Splenitis	1	1	...	...	...	...	3	3	...	...	...
Inflammation of lymphatic glands	1	1	...	...	...	1	49	50	...	3	...
Suppuration of lymphatic glands	5	5	...	1	...
Lymphangitis	1	1	...	...	...	...	11	11	...	1	...
Elephantiasis	4	4	...	...	...
Congestion of spleen	1	1	...	...	...
DISEASES OF THE URINARY SYSTEM :—												
Nephritis	7	7	6	...	...
Stricture	1	11	12	2	...	...
Inflammation of bladder	2	...	2	...	...	...
Retention of urine	3	3	...	...	...
Hæmaturia	6	6	...	...	...
Cystitis	1	1	...	...	...	...	8	8	...	...	...
Anuria	1	1	1	...	...
Pyonephrosis	1	1	1	...	...
DISEASES OF GENERATIVE SYSTEM :—												
Urethritis	4	4	...	...	...
Prostatitis	2	2	...	...	...	...	...	...	...	...	...
Phimosis	15	15	...	7	...
Paraphimosis	1	...	1	...	...	...
Ulcer penis	3	5	8	1	1	...
Soft chancre	1	40	41	1	...	...
Hydrocele of cord	1	1	...	...	...
Variocele	2	2	...	...	...
Hydrocele	1	19	20	...	...	...
Orchitis	1	1	...	...	...	...	22	22	...	...	...
Epididymitis	2	2	..	...	...
Urethral fistula	1	2	3	...	...	...
Urethral stricture	1	1	...	...	...
Dysmenorrhœa	2	2	...	2	...
Senile atrophy	1	1	1	...	...
Balanitis	1	1	...	...	...
DISEASES OF THE ORGANS OF LOCOMOTION :—												
Osteitis	1	1	...	...	...
Periostitis	1	8	9	...	1	...
Caries	1	1	2	1	...	...
Necrosis	1	1	...	...	...
Arthritis	9	9	1	...	...
Synovitis	1	56	57	...	...	...
Myositis	1	3	4	...	...	...
Myalgia	3	123	126	...	...	...
Bursitis	3	3	...	...	...
Ainhum	3	3	...	...	...

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1914—continued.

DISEASES.	EUROPEANS.						NATIVES.				
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.			Remaining on 31st Dec., 1914.
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.	
DISEASES OF THE CONNECTIVE TISSUE :—											
Inflammation	3	67	70	...	1
Abscess	9	167	176	3	2
Œdema	1	17	18	2	...
DISEASES OF THE SKIN :—											
Urticaria	1	1	...	...
Eczema	4	4	...	...
Impetigo contagiosa	2	2	...	...
Boil	27	27	...	...
Herpes	1	6	7	...	...
Dermatitis	4	4	...	...
Corn	2	2	...	...
Sebaceous cyst	1	1	...	...
Whitlow	12	12	...	...
Ulcer	1	1	...	...	...	4	233	237	1	42
Carbuncle...	1	1	...	...	...	1	...	1	...	...
Sycosis	1	1	...	...
SURGICAL OPERATIONS :—											
Arthritis of knee	1	1	1	1
Hernia	13	13	...	3
Hydrocele	11	11	...	1
Piles	2	2	...	...
Removal of lymph gland...	1	1	...	...
Removal of appendix	1	1	...	...
Removal of exostosis	1	1	...	...
Abscess of neck	1	1	...	...
Phimosis	6	6	...	...
Papilloma	1	1	...	...
Epithelioma of jaw	1	1	...	...
Ganglion	1	1	...	...
Hypopyon...	1	1	...	...
TOTALS	5	236	241	8	35	2	212	5,752	5,964	346	193

IN-PATIENTS.

SUMMARY OF CASES TREATED IN HOSPITALS (ALL DISEASES).

STATION.				EUROPEANS.						NATIVES.						
				Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	
					Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.			
Zungeru	...	...	...	...	96	96	1	14	...	20	794	814	21	15
Lokoja	...	...	...	2	71	73	3	5	1	13	636	649	20	20
Abinsi	...	...	...	...	...	...	...	...	...	3	76	79	4	...
Ankpa	...	...	...	...	...	...	...	...	...	...	68	68	...	...
Baro	...	...	...	...	...	...	...	...	...	7	111	118	3	3
Birnin-Kebbi	...	...	...	...	...	...	...	...	...	...	87	87	3	4
Bauchi	...	...	...	...	...	...	...	...	...	9	255	264	28	3
Geidam	...	...	...	...	...	...	...	...	...	...	31	31	2	...
Ibi	...	...	...	...	...	...	...	...	...	8	126	134	17	12
Ilorin	...	...	...	...	...	...	...	...	...	1	129	130	4	1
Jebba	...	...	...	...	...	...	...	...	...	...	29	29	2	1
Kabba	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kaduna	...	...	...	3	69	72	4	16	1	19	917	936	69	47
Kakuri	...	...	...	...	...	...	...	...	...	...	179	179	10	...
Kano	...	...	...	...	...	...	...	...	...	36	679	715	44	38
Katagum	...	...	...	...	...	...	...	...	...	5	104	109	1	...
Katsena	...	...	...	...	...	...	...	...	...	2	56	58	14	...
Kontagora	...	...	...	...	...	...	...	...	...	...	8	8	...	...
Maiduguri	...	...	...	...	...	...	...	...	...	58	595	653	69	13
Minna	...	...	...	...	...	...	...	...	...	3	68	71	9	...
Nafada	...	...	...	...	...	...	...	...	...	...	41	41	...	...
Naraguta	...	...	...	...	...	...	...	...	...	10	...	10	1	...
Offa	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Railhead	...	...	...	...	...	...	...	...	...	...	23	23	...	...
Sokoto	...	...	...	...	...	...	...	...	...	10	274	284	4	4
Womba	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Yola	...	...	...	...	...	...	...	...	...	3	305	308	3	15
Zaria	...	...	...	...	...	...	...	...	...	5	161	166	18	17
TOTALS				5	236	241	8	35	2	212	5,752	5,964	346	193

RETURN OF DISEASES AND DEATHS (OUT-PATIENTS) FOR THE
YEAR 1914.

DISEASES.	EUROPEANS.						NATIVES.					
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.		
INFECTIVE DISEASES:—												
Blackwater fever	14	14	2	5	1	...	...	...	...	...	...
Chicken-pox	1	23	24	...	...	...
Cow-pox	14	14	...	...	...
Diphtheria	4	4	1	3	...	...	...	...	...	...	...
Dysentery...	...	47	47	...	3	...	...	321	321	36	1	...
Enteric fever
Gangrene	2	2	...	...	...
Gonorrhœa ...	5	16	21	...	...	...	6	395	401	...	6	...
Influenza	8	8	...	...	...	...	23	23	3	...	...
Leprosy	784	185	969	124	666	...
Madura disease	2	2	...	...	...
Malaria ...	3	327	330	...	4	3	8	1,173	1,181	15	...	...
Measles	1	1	...	...	...	...	3	3	...	...	...
Mumps	3	3	...	1	...
Pneumonia	2	2	...	...	...	1	104	105	29	...	...
Pyæmia
Pyrexia of uncertain origin	4	4	...	...	...	...	16	16	...	...	...
Rheumatic fever	10	10	...	1	...	3	122	125	...	...	...
Septicæmia	4	4	3	...	...
Small-pox	165	165	40	5	...
Syphilis ...	1	5	6	...	...	1	26	264	290	5	5	...
Tuberculosis	5	5	2	...	...
Yaws	3	23	26	...	...	...
Tetanus	1	1	1	...	...
Enteritis infective	2	2	...	...	...	...	...	...	...	...	...
Erysipelas	2	2	...	...	...
Yellow fever	1	1	1	...	...	...	...	...	...	...	...
GENERAL DISEASES:—												
Anæmia ...	1	34	35	...	4	...	...	37	37	...	...	...
Debility	36	36	...	3	...	...	127	127	1	...	...
Gout	1	1	...	...	...	...	...	...	...	...	...
Rickets
Leukæmia	2	2	...	...	...
INTOXICATIONS:—												
Alcoholism
Tobacco poisoning
Morphinism
NEW GROWTHS, NON-MALIGNANT:—												
Lipoma	2	2	...	...	...
Fibroma	5	5	...	...	...
Adenoma	3	3	...	...	...
Papilloma	1	1	...	...	...	...	2	2	...	...	...
Pterygium...
Osteoma
Myoma
Granulation tumour	1	1	...	...	...	...	...	...	...	...	...
Fibromyoma	1	1	...	...	...

RETURN OF DISEASES AND DEATHS (OUT-PATIENTS) FOR THE YEAR 1914—continued.

DISEASES.	EUROPEANS.						NATIVES.					
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.		
NEW GROWTHS, MALIGNANT :—												
Carcinoma	1	1	...	...
Sarcoma	2	2	...	...
CYSTS :—												
Ganglion	25	25	...	...
Thyro-glossal	
Meibomian	
Tarsal	
EFFECTS OF PARASITES :—												
Trematoda :—												
<i>Bilharzia hæmatobia</i>	6	6	...	...
Schistosomiasis...	
Cestoda :—												
<i>Tænia solium</i>	1	1	...	...	...	...	101	101	...	...
<i>Tænia saginata</i>	2	2	...	...	...	3	569	572	...	...
<i>Bothriocephalus latus</i> (not identified).	
Nematoda :—												
<i>Ascaris lumbricoides</i>	1	1	...	...	...	...	55	55	...	...
<i>Dracunculus medinensis</i>	8	678	686	1	7	
Filariasis	6	6	...	...
Ankylostomiasis	119	119	1	...	
<i>Oxyuris vermicularis</i>	20	20	...	...
<i>Trichocephalus dispar</i>	
<i>Filaria volvulus</i>	
Insecta :—												
<i>Musca vomitoria</i>	1	1	...	...	...	...	...	...	...	...
<i>Pediculus</i>	2	2	...	...	...	...	7	7	...	...
<i>Pulex penetrans</i>	4	4	...	...
Arachnida :—												
<i>Sarcoptes scabiei</i>	1	1	...	...
Hyphomycetes :—												
<i>Tinea trichophytina</i>	9	9	...	...
<i>Tinea tonsurans</i>	1	1	...	...	...	...	5	5	...	...
<i>Tinea circinata</i>	1	1	2	...	...	...	...	11	11	...	...
<i>Tinea cruris</i>	3	3	...	...	...	...	5	5	...	...
<i>Tinea favosa</i>	1	1	...	...
<i>Tinea imbricata</i>	2	2	...	...
Unclassified :—												
Craw-craw	2	2	...	...	...	3	188	191	...	...
Worm embryo, unknown	
EFFECTS OF INJURIES :—												
Burns	1	1	2	...	...	...	6	121	127	1	1
Scalds	1	1	...	...	...	...	16	16	...	...
Sunstroke	26	26	...	...	1	...	10	10	1	...	
Heatstroke	1	1	...	...
Shock	1	1	...	...
Abrasions	10	10	...	...	...	8	581	589	...	1	
Contusions	1	16	17	...	...	...	2	547	549	1	4
Wounds	34	34	...	...	...	47	4,515	4,562	...	41	
Wounds, gun-shot	5	5	...	1	...	1	51	52	...	...
Wounds, arrow	8	8	...	...
Sprains	10	10	...	...	...	1	153	154	...	...
Strains	4	4	...	...	...	1	30	31	...	...

RETURN OF DISEASES AND DEATHS (OUT-PATIENTS) FOR THE YEAR 1914—*continued*.

DISEASES.	EUROPEANS.						NATIVES.				
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.			Remaining on 31st Dec., 1914.
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.	
DISEASES OF THE EYE :— <i>contd.</i>											
Oedema of eyelid
Blepharitis marginalis	2	2	...	...	...	1	12	13	...	...
Sty	1	1	...	...	...	1	22	23	...	...
Opacity	3	3	...	...
Glaucoma	2	2	...	...
Optic neuritis	1	1	...	...
Hypopyon...	2	2	...	...
Cataract	2	2	...	...
Myopia	2	2	...	...
Episcleritis	1	1	...	...
Panophthalmitis	2	2	...	...
Ectropion	3	3	...	...
DISEASES OF THE EAR :—											
Inflammation of external meatus	3	3	...	...	...	...	61	61	...	...
Suppuration of external meatus	7	7	...	...
Accumulation of wax in external meatus	9	9	...	...	...	1	15	16	...	...
Inflammation of middle ear	...	3	3	...	...	...	1	73	74	...	...
Perforated membrana tympani
Deafness	1	1	...	...	...	...	1	1	...	...
Earache
Otorrhœa	1	1	...	...
Obstruction,eustachian tube	1	1	...	...
DISEASES OF THE NOSE :—											
Rhinitis	5	5	...	...	...	...	9	9	...	...
Coryza	4	4	...	...	...	...	2	2	...	...
Epistaxis	2	2	...	...
Naso-pharyngeal catarrh...	...	1	1	...	...	...	...	...	...	...	...
Inflammation	1	1	...	...
DISEASES OF THE CIRCULATORY SYSTEM :—											
Myocarditis	2	2	1	...
Pericarditis	1	1	...	...	...	...	...	...	...	...
Endocarditis	1	1	1	...
Tachycarditis
Valvular disease of heart, mitral	20	20	2	...
Valvular disease of heart, aortic	4	4	1	...
Pulmonary embolism
Aneurism	1	1	1	...	...	...	...	...	...	...
Syncope	3	3	3	...
Double aortic heart	2	13	15	1	...
Varix
Thrombosis
Cardiac debility
Phlebitis	1	1	...	...	...	...	...	...	...	...
Arterio-sclerosis	1	1	...	...	...	...	...	...	...	...
Atheroma	1	1	...	...	...	...	...	...	...	...

RETURN OF DISEASES AND DEATHS (OUT-PATIENTS) FOR THE YEAR 1914—*continued.*

DISEASES.	EUROPEANS.						NATIVES.					
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.			Remaining on 31st Dec., 1914.	
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.		
DISEASES OF THE RESPIRATORY SYSTEM :—												
Empyema
Asthma	2	2	...	...	...	...	9	9	...	...	...
Laryngitis	1	32	33	...	...	...
Tracheitis	3	3	...	...	...	...	39	39	...	...	...
Bronchitis, acute	7	7	...	...	...	7	298	305	4	1	...
Bronchitis, catarrhal	26	26	...	...	...	...	1,040	1,040	2	5	...
Broncho-pneumonia	1	10	11	3	...	...
Pleurodynia	6	6	...	...	...
Phthisis	5	5	...	...	...
Pleurisy	3	3	...	...	...	...	52	52	...	...	...
Hæmoptysis	1	1	...	1	...	...	...	...	...	...	...
Abscess of Lung	1	1	1	...	...
Emphysema	2	2	...	...	...
DISEASES OF THE DIGESTIVE SYSTEM :—												
Stomatitis...	2	2	...	...	...	...	32	32	1	...	...
Caries of dentine...	11	11	...	...	...	1	169	170	...	...	...
Inflammation of dental periosteum	1	1	...	...	...	...	9	9	...	...	...
Gum-boil	4	4	...	...	...	...	17	17	...	...	...
Toothache...	3	3	...	...	...	...	71	71	...	...	...
Glossitis	5	5	...	...	...
Sore throat	3	3	...	...	...	...	47	47	...	...	...
Tonsillitis	17	17	...	...	...	...	33	33	...	...	...
Pharyngitis	1	10	11	...	...	...	1	79	80	...	...	...
Gastritis	1	45	46	...	2	1	1	345	346	...	...	...
Ulcer, duodenal	1	1	...	...	...	...	...	...	...	...	...
Dilatation of stomach
Indigestion	31	31	...	...	...	1	144	145	...	...	...
Gastralgia... ..	1	2	3	...	...	...	...	20	20	...	...	...
Enteritis	15	15	...	...	...	...	59	59	...	...	...
Appendicitis	3	3	...	2	...	...	...	...	...	...	...
Colitis	14	14	1	1	...	1	36	37	1	...	...
Hernia, umbilical	2	2	...	...	...
Hernia, inguinal	24	24	1	1	...
Obstruction, intestinal
Diarrhœa	86	86	...	...	...	1	761	762	3	2	...
Constipation	6	6	...	...	...	1	1,950	1,951	...	1	...
Colic	6	6	...	...	...	2	245	247	...	...	...
Dilatation of intestines
Fissure in ano	3	3	...	...	...
Piles	12	12	...	...	...	1	39	40	1	...	...
Hepatitis	1	4	5	...	...	...	...	11	11	...	...	...
Congestion of liver	10	10	...	1	...	...	5	5	...	...	...
Jaundice	3	3	...	...	...	...	4	4	...	...	...
Peritonitis	1	1	1	...	...
Dropsy	9	9	2	...	...
Ischio-rectal abscess
Vomiting	1	1	...	1	...	...	...	...	...	...	...
Parotitis	1	1	...	...	...	...	4	4	...	...	...
Biliary colic	1	1	...	...	...
Prolapse of rectum	5	5	...	...	...

RETURN OF DISEASES AND DEATHS (OUT-PATIENTS) FOR THE YEAR 1914—*continued*.

DISEASES.	EUROPEANS.						NATIVES.				
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.			Remaining on 31st Dec., 1914.
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.	
DISEASES OF THE LYMPHATIC SYSTEM :—											
Splenitis	1	10	11	1	...
Inflammation of lymphatic glands	7	7	...	...	...	1	122	123	...	1
Suppuration of lymphatic glands	2	2	...	...	...	1	20	21	...	...
Lymphangitis	2	2	...	...	1	...	14	14	...	...
Elephantiasis	3	3	...	...
Lymph scrotum
Fibrosis	1	1	...	...	...	...	2	2	...	...
DISEASES OF THE THYROID GLAND :—											
Goitre	1	...	1	...	...
DISEASES OF THE URINARY SYSTEM :—											
Nephritis	1	1	...	...	...	...	5	5	...	...
Nephralgia
Renal colic	2	2	...	...	...	...	...	...	...	...
Stricture	1	1	...	1	...	...	3	3	...	...
Inflammation of bladder...
Calculus, bladder
Retention of urine	1	1	...	...
Hæmaturia	1	1	...	...	...	...	2	2	...	...
Phosphaturia
Cystitis	9	9	...	...	...	...	9	9	...	...
Lithuria	1	1	...	...
DISEASES OF THE GENERATIVE SYSTEM :—											
Urethritis...	10	10	...	...	...	1	9	10	...	...
Prostatitis...	1	1	...	...	...	...	...	...	...	...
Abscess prostate
Phimosis	7	7	...	...
Paraphimosis
Ulcer of penis	2	2	...	...	...	4	15	19	...	1
Soft chancre	1	...	1	...	...	...	1	34	35	...	2
Hydrocele of cord	1	1	...	...
Variocele	3	3	...	...
Hydrocele...	1	27	28	...	...
Orchitis	6	6	...	1	...	2	51	53	...	1
Epididymitis	1	1	...	...
Inflammation of ovary
Retroflexion of uterus	1	1	...	...
Inflammation of vagina
Vaginal fistula
Urethral fistula	1	1	...	...
Salpingitis	1	1	...	...
Dysmenorrhœa	2	3	5	...	...
Menorrhœa
Metorrhagia	1	1	...	...
Leucorrhœa
Amenorrhœa	1	1	...	...
Menorrhagia	2	2	...	...
Perimetritis	1	1	...	...

RETURN OF DISEASES AND DEATHS (OUT-PATIENTS) FOR THE YEAR 1914—continued.

DISEASES.	EUROPEANS.						NATIVES.					
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.		
AFFECTIONS CONNECTED WITH PREGNANCY :—												
Vomiting
Abortion	2	2	...	...	...
AFFECTIONS CONSEQUENT ON PARTURITION :—												
Mastitis	2	2	...	...	...
Post-partum hæmorrhage	1	1	...	...	...
DISEASES OF THE FEMALE BREAST :—												
Suppuration
DISEASES OF THE ORGANS OF LOCOMOTION :—												
Osteitis	5	5	...	...	...
Periostitis	1	1	...	...	...	...	25	25	...	...	1
Caries	1	3	4	...	...	...
Necrosis	1	1	...	...	...
Arthritis	4	4	...	1	...	2	55	57	...	...	...
Synovitis	6	6	...	1	...	1	125	126	...	...	1
Ankylosis
Myositis	1	19	20	...	...	...
Myalgia	23	23	...	...	...	11	1,343	1,354	...	...	4
Bursitis	1	1	...	...	...	...	21	21	...	...	...
Ainhum	1	4	5	...	...	...
Ostalgia
Coxa vara...	1	2	3	...	...	...
Flat foot	2	2	...	...	...
DISEASES OF THE CONNECTIVE TISSUE :—												
Inflammation	6	6	...	...	...	5	193	198	...	...	...
Abscess	1	7	8	...	...	...	8	392	400	...	...	6
Œdema	2	2	...	...	...	4	37	41	...	...	...
DISEASES OF THE SKIN :—												
Erythema	1	1	...	...	...	...	2	2	...	...	...
Urticaria	15	15	...	...	...
Eczema	12	12	...	...	...	...	45	45	...	...	...
Impetigo contagiosa	...	1	1	...	...	...	...	20	20	...	...	...
Boil	20	20	...	1	...	...	178	178	...	...	...
Herpes	1	18	19	...	...	...
Psoriasis	1	2	3	...	...	...	...	6	6	...	...	...
Dermatitis	3	3	...	...	...	1	8	9	...	...	...
Corn	11	11	...	...	...
Seborrhœa...	1	1	...	...	...
Sebaceous cyst	1	1	...	...	...
Acne	1	1	...	...	...	...	1	1	...	...	...
Prickly heat	...	5	5	...	...	...	...	...	...	...	...	...
Onychia	2	2	...	...	...	...	...	...	...	...	...
Whitlow	1	97	98	...	...	3

RETURN OF DISEASES AND DEATHS (OUT-PATIENTS) FOR THE YEAR 1914—continued.

DISEASES.	EUROPEANS.						NATIVES.				
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.			Remaining on 31st Dec., 1914.
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.	
DISEASES OF THE SKIN]:—contd.											
Ulcer	11	11	...	1	...	48	1,238	1,286	...	40
Wart	1	1	...	...
Carbuncle	2	2	...	...	...	...	2	2	...	1
Pityriasis
Ulerythema	1	1	...	...	...	...	...	...	...	...
Veldt sore...	3	3	...	...	...	...	...	...	...	...
Sudamina	1	1	...	...	...	...	...	...	...	...
Pemphigus	1	1	...	...
SURGICAL OPERATIONS :—											
Extraction of teeth	2	2	...	...	...	...	4	4	...	...
Amputation of finger	1	1	...	...
Pterygium	3	3	...	...
Phimosis	4	4	...	...
Sarcoma	1	1	...	...
Papilloma	1	1	...	...
Empyema	1	1	...	...
TOTAL	23	1,242	1,265	6	47	10	1,048	22,521	23,569	296	817

OUT-PATIENTS.

SUMMARY OF CASES TREATED IN HOSPITALS (ALL DISEASES).

STATION.	EUROPEANS.						NATIVES.				
	Remained at end of 1913.	YEARLY TOTAL.				Remaining on 31st Dec., 1914.	Remained at end of 1913.	YEARLY TOTAL.			Remaining on 31st Dec., 1914.
		Admissions.	Total Cases Treated.	Deaths.	Invalided.			Admissions.	Total Cases Treated.	Deaths.	
Zungeru ... ..	...	...	...	...	...	...	13	1,482	1,495	1	...
Lokoja ... ..	...	92	92	...	2	...	26	2,434	2,460	15	18
Abinsi ... ..	...	15	15	...	...	...	27	311	338	...	...
Ankpa ... ..	...	6	6	...	...	...	3	370	373	1	...
Baro ... ..	...	81	81	...	1	1	8	558	566	...	3
Bauchi	1	7	8	...	...	...	18	748	766	7	...
Birnin-Kebbi ... ..	...	5	5	...	...	...	10	417	427	33	4
Geidam	5	27	32	...	...	...	18	529	547	4	...
Ibi	1	61	62	...	1	2	12	763	775	1	2
Ilorin	2	23	25	1	4	...	3	349	352	...	9
Jebba ... ..	...	43	43	1	2	...	2	372	374	...	...
Kabba ... ..	...	4	4	...	...	...	9	411	420	1	...
Kaduna ... ..	...	66	66	1	3	...	3	2,437	2,440	8	15
Kakuri ... ..	...	43	43	...	...	...	...	1,163	1,163	3	...
Kano	1	175	176	2	13	2	14	1,999	2,013	2	10
Katagum ... ..	...	4	4	...	...	...	4	265	269	...	...
Katsena ... ..	...	2	2	...	...	...	10	263	273	...	...
Kontagora ... ..	...	2	2	...	...	...	2	165	167	...	...
Maiduguri	2	18	20	...	...	...	686	949	1,635	131	683
Minna ... ..	...	67	67	...	...	...	3	338	341	...	10
Nafada ... ..	...	9	9	...	...	...	11	326	337	2	...
Naraguta	3	91	94	1	3	1	8	1,379	1,387	71	...
Offa	1	45	46	...	1	...	4	822	826	...	20
Railhead ... ..	...	24	24	...	...	...	5	77	82	5	...
Sokoto	1	26	27	...	...	...	122	669	791	...	...
Womba and Jemaa ... ..	...	21	21	...	6	...	12	911	923	9	8
Yola	1	82	83	...	6	3	1	1,218	1,219	...	24
Zaria	5	203	208	...	5	1	14	796	810	2	11
TOTALS	23	1,242	1,265	6	47	10	1,048	22,521	23,569	296	817

